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PROGRAM BUDGETING IN THE UNITED STATES COAST GUARD

by

LT Donald M. Morrison, Jr., USCG

Thesis
M834

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PROGRAM BUDGETING IN THE UNITED STATES COAST GUARD

by

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Bachelor of Science, 1957
United States Coast Guard Academy
New London, Conn.

A thesis submitted to the School of Government and Business Administration of The George Washington University in partial satisfaction of the requirements for the degree of Master of Business Administration

April 30, 1966

Thesis approved by

Karl Ernest Stromsem, Ph.D.

Professor of Public Administration

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PREFACE

The federal government in recent years has been faced with an ever increasing demand for its services as a result of extensive growth in the nation's population and economy. In a fundamental sense, the solution to this problem requires an economic approach to management. Such a view is concerned with allocating scarce resources in order to get the most out of available resources.

Integral to the allocation of resources are the processes of planning, programming, and budgeting. Plans must be developed to determine actions and broad requirements needed to accomplish specified objectives. Programming translates plans into more specific manpower and materiel requirements. Budgeting translates manpower and materiel resource requirements into financial resources. Thus, these processes are closely related and interdependent.

Because of a number of shortcomings in the conduct of these processes that generally prevailed throughout the federal government, President Lyndon B. Johnson on August 25, 1965 instructed members of the cabinet and heads of federal agencies to begin introducing a new and revolutionary system of planning, programming and budgeting. In discussing the broad objectives of the new system, the President stated:

> This program is aimed at finding new ways to do new jobs faster, better, less expensively; to insure sounder

> judgment through more accurate information; to pinpoint those things we ought to do more, and to spotlight those things we ought to do less; to make our decision-making process as up to date as our space-exploring equipment.[1]

The purpose of this study has been to evaluate the progress made in the United States Coast Guard during the past ten years in the processes of planning, programming and budgeting. To form a basis for data collection and evaluation, the following three related questions were formulated: (1) What significant planning, programming, and budgeting developments have taken place in the Coast Guard during the past ten years? (2) What contributions have these developments made toward lessening the impact of implementing the President's new system? (3) What major steps, approaches and problems were involved in the initial efforts to implement the new system?

Data has been collected through library research, internal document research at U. S. Coast Guard Headquarters, Washington, D. C., and interviews with cognizant Headquarters officers. Because the subject matter studied was in such a dynamic state, a data collection cut-off date of February 18, 1966 was established as a point of departure between events transpired and future events.

The assistance provided by the members of the U. S. Coast Guard Headquarters staff whom I interviewed is appreciated and gratefully acknowledged. I particularly wish to thank Commanders William H. Boswell, William H. Fitzgerald, Jr., and Thomas E. Hawkins for their help.

---

[1]U. S., President. "Statement by the President to Members of the Cabinet and Heads of Agencies, August 25, 1965." Weekly Compilation of Presidential Documents, August 30, 1965, p. 141.

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TABLE OF CONTENTS

Page

PREFACE ii

LIST OF ILLUSTRATIONS vi

Chapter

I. INTRODUCTION 1

Historical Background of the Coast Guard
Missions
Formal Organizational Structure
Field units
Commandant
Chief of Staff

II. MOVEMENT TOWARD A COAST GUARD PROGRAM BUDGET . . 14

External Factors
Hoover Commissions
Coast Guard Roles and Missions Study
Program Budget Pilot Study
Premises and Goals
Cost Distribution Rationale
Final Consolidation and Determination of Program Budget Activities
Other Appropriations
Summary and Appraisal

III. TOOLING UP 30

Budgeting
Response to Program Budget Pilot Study
Modification and Initial Implementation
Planning-Programming
Facility Requirements Plans
Budgetary Planning Procedures
Long-range Planning

IV. A QUICKENING PACE 49

Highlights of Bureau of the Budget Bulletin No. 66-3
Initial Implementing Action taken by the Coast Guard

Chapter Page

Program Structure
Quantified Objectives and
Accomplishments
Future Required Actions

V. CONCLUSIONS 59

APPENDIX 63

BIBLIOGRAPHY 64

LIST OF ILLUSTRATIONS

Figure		Page
1.	U. S. Coast Guard, Organization Chart	7
2.	U. S. Coast Guard Headquarters, Organization Chart	9
3.	U. S. Coast Guard Headquarters, Program Analysis Division, Organization Chart	12
4.	U. S. Coast Guard Headquarters, Budget and Cost Analysis Division, Organization Chart	13
5.	Comparison between then Existing Budget Activities, Roles and Mission Categories and Program Budget Activities	21
6.	Operating Expenses, Fiscal Year 1962 (Percentages) Comparison between former Functional Activities and New Program Budget Activities	27
7.	Example of Coast Guard Program Structure	55

List of Illustrations

1. Fig. 1, Upper Cheek, Injections 1

2. Fig. 2, Upper Cheek Reductions, Procedures Used 1

3. Fig. 3, Cheek Cheek Reductions, Procedures Results Reduction Used 1

4. Fig. 4, Chest Cheek Reductions, Before and Cost Results Injection, Procedures Used 13

5. Complications Following Cheek Reducing Injections, Table and Statistics 17

6. Cosmetics Reducing Cheek Injections, Procedures Used 27

CHAPTER I

INTRODUCTION

Frederick Mosher, writing on the context of budgeting, said:

> A going organization is a great package of systems, traditions, habits, values and beliefs, relationships, and behavioral patterns . . . . the accustomed patterns of formal and informal organizations; the configuration of power within the organization; and even the missions and established programs--all of these affect and are affected by the budget and must be reckoned with by the administrator or legislator seeking changes.[1]

Mosher's statement shows that a discussion of the budgeting process requires an understanding and consideration of the organizational environment to which it relates. Since this study is about budgeting and the related processes of planning and programming in the United States Coast Guard,[2] an overview of its history, missions and organization is considered appropriate.

Historical Background of the Coast Guard

The genesis of the present day Coast Guard goes back to the first United States Congress and the efforts of Alexander Hamilton, first Secretary of the Treasury, to place the American

---

[1]Frederick C. Mosher, Program Budgeting: Theory and Practice (New York: American Book--Stratford Press, Inc., 1954), pp. 13, 14.

[2]Hereafter, the term "Coast Guard" is used and unless otherwise noted refers to the United States Coast Guard.

CHAPTER I

INTRODUCTION

nation on a firm footing. At Hamilton's request Congress authorized the building of ten cutters for the protection of the customs revenue. Also authorized were forty officers who were made "Officers of the Customs."[1] The previous year this Congress passed a law which accepted title to twelve lighthouses built by the colonies along the Atlantic seaboard and gave the Secretary of the Treasury responsibility for constructing and maintaining aids to navigation.[2]

As the nation grew, a combination of changing conditions and outstanding incidents led to the establishment of new services, all originally in the Treasury Department, related to the nation's responsibilities to its seafaring citizens.

> The Coast Guard represents in its historical development since 1790 an amalgamation into one integral Service of the former Revenue Cutter Service, the Lifesaving Service, the Lighthouse Service, and the Bureau of Marine Inspection and Navigation, the original establishments of which are as follows:
>
> (a) The Revenue Cutter Service--by the Act of August 4, 1790.
>
> (b) The Lifesaving Service--by the Act of June 20, 1874.
>
> (c) The Light house Service--by the Act of August 7, 1789.
>
> (d) The Bureau of Marine Inspection and Navigation--by the Act of July 7, 1838, as the Steamboat Inspection Service, and by the Act of July 5, 1884, as the Bureau of Navigation;--by the Act of June 30, 1932, the Bureau of Navigation and the Steamboat Inspection Service were consolidated to form a new bureau known as the Bureau of

---

[1] CAPT Walter C. Capron, USCG (Ret.), The U. S. Coast Guard (New York: Franklin Watts, Inc., 1965), pp. 10, 11. Before his retirement in 1962, CAPT Capron served as Deputy Chief of Staff at Coast Guard Headquarters.

[2] Ibid., p. 30.

[illegible] of a free [illegible]. At [illegible]'s request [illegible]
[illegible] the [illegible] of the [illegible] for the [illegible] of
the [illegible] [illegible]. [illegible] [illegible] were [illegible] [illegible]
were made "citizens of the [illegible]."[1] The [illegible] [illegible] [illegible]
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built or the [illegible] along the [illegible] [illegible] and [illegible] the
[illegible] of the [illegible] responsibility for [illegible] and
maintaining [illegible] to navigate.[2]

In the [illegible] case, a [illegible] of [illegible] [illegible]
and [illegible] [illegible] had [illegible] the [illegible] of the
[illegible], all [illegible] in the [illegible] [illegible]. Relief
to the [illegible]'s [illegible] [illegible] the [illegible] [illegible].

The Coast Guard [illegible] in the [illegible] [illegible]
[illegible] [illegible], an [illegible] [illegible] of the [illegible]
of the Power Squadron [illegible], the [illegible]
[illegible], the [illegible] [illegible], and the [illegible] of
[illegible] and [illegible], the [illegible] [illegible] of
[illegible] are as follows:

(a) The [illegible] [illegible] [illegible] the act of [illegible]
[illegible], 1790.

(b) The [illegible] [illegible] [illegible] the act of [illegible] 2d, 1877.

(c) The light house [illegible] the act of [illegible] 31, 1789.

(d) The Bureau of Marine Inspection and Navigation, by the act of July 7, 1932, as the successor [illegible] Service, and by the act of July 5, 1884, as the [illegible] of Navigation, the act of June 20, 1838, as the [illegible] of Internal Revenue and the [illegible] Service [illegible] [illegible] to form a new [illegible] [illegible] by the [illegible] of

---

[1] Mary Miller C. Corwin, [illegible] (Ser.) [illegible] S. [illegible] Board (Inc. Tenn. Township Navig. Inst., 1911), [illegible] 12, [illegible] the [illegible] in [illegible], [illegible] Congress passed an [illegible] [illegible] of Coast of Coast Guard [illegible].

[2] [illegible], p. 32.

Navigation and Steamboat Inspection;--by the Act of May 27, 1936, the name of this bureau was changed to the Bureau of Marine Inspection and Navigation.[1]

The Coast Guard was created in 1915 by an Act that merged the Revenue Cutter Service and the Lifesaving Service. This act made the Coast Guard a branch of the armed forces of the United States and thus established a unique organizational arrangement--peacetime service under the Department of the Treasury and wartime service under the Department of the Navy.[2]

As an economy measure, the Bureau of Lighthouses, then in the Department of Commerce, was amalgamated with the Coast Guard in 1939.[3] This merger joined the two oldest maritime services after they had operated independently for nearly 150 years.

Greater diversification of responsibility resulted from the transfer of the Bureau of Marine Inspection and Navigation to the Coast Guard in 1942;[4] this transfer was made permanent in 1946. Although minor reorganizations have occurred during subsequent years the basic organization of the Coast Guard "has seen little change since World War II."[5]

---

[1]U. S., Coast Guard, Organization Manual, (CG-229), p. 1-1. Cited hereafter as Organization Manual.

[2]U. S., Congress, An Act to Create the Coast Guard, Public Law 239, 63rd Cong., 2d Sess., 1915.

[3]U. S., Congress, Reorganization Act of 1939, Plan II, Public Law 19, 76th Cong., 1st Sess., 1939.

[4]U. S., President, Executive Order No. 9083, Redistribution of Maritime Functions, February 28, 1942.

[5]U. S., Coast Guard, Coast Guard Objectives (CG-378), p. 1. Cited hereafter as CG Objectives.

Missions

Statutory authority, major functions, and responsibilities of the Coast Guard are codified in Title 14 of the United States Code. In broad, succinct terms, the mission objectives of the Coast Guard are:

Aids to Navigation--Safe passage on and over the high seas and waters subject to the jurisdiction of the United States through effective and reliable systems of aids to navigation.

. . . . . .

Search and Rescue--Timely assistance to persons and property in distress on or over the high seas, in waters subject to the jurisdiction of the United States, and elsewhere whenever forces are available.

. . . . . .

Ocean Stations--Safe passage of air and transoceanic traffic through areas of United States responsibility, and such other areas as may be in the National interest. Scientific knowledge of the atmosphere, the sea, and their interface, through data collection at temporary or permanently established ocean stations.

. . . . . .

Merchant Marine Safety--Safety of life and property on the high seas and internal waters through law enforcement and regulation of merchant vessels, their officers and crews.

. . . . . .

Icebreaking--Waterborne access to ice-bound locations in furtherance of National economic, scientific, defense, and consumer needs.

. . . . . .

Law Enforcement--Protection of lives, property, natural resources and National interests through enforcement of Federal law upon the high seas and waters subject to the jurisdiction of the United States.

. . . . . .

Port Security--Safe, secure port areas and facilities, and protection of the National interest.

. . . . . .

Oceanography--Knowledge of the sea, its boundaries, and its resources, through collection and analyses of data in support of the National interest.

. . . . . .

Military Readiness--An effective ready force responsive to specific tasks in time of war or emergency in support of National security.

. . . . . .

Reserve Training--Trained augmentation forces for war or National emergency and such other times as the National security may require.

. . . . . .

Cooperation with other Government Agencies--Maximum utilization of National resources through cooperative efforts with government agencies in pursuing programs in the National interest.[1]

These mission objectives show that the Coast Guard engages in a wide spectrum of activities that must compete with each other and with other federal activities for budget dollars.

Formal Organizational Structure

Unlike the Navy, which has a bilinear chain of command, the Coast Guard is organized in accordance with the vertical general-staff system similar to that of the Army. Under this system, the military chief at each hierarchial level is responsible not only for the total operational effort, but also for the business and logistics administration of his command. The basic line organization of the Coast Guard has three hierarchial levels: the Commandant, twelve District Commanders, and Commanding Officers of individual operational and logistics units. This structure is modified by the elimination of the middle echelon in the case of certain Headquarters units. In addition, several special echelons "have been established in order to meet the requirements imposed by . . . peculiar conditions which complicate

---

[1] Coast Guard Objectives, pp. 3-12.

[illegible] Departments--[illegible] [illegible] [illegible] [

overall administration."[1] Figure 1 indicates the basic line organization.

Field Units

Each District Commander is in charge of a force of operational and logistical field units with which he is expected to perform all Coast Guard missions within his District boundary. Control and coordination of operations involving forces of more than one district is afforded by Area Commanders on the East and West coasts.

A significant feature of the operating field units is their multi-mission capability; each unit is deliberately designed, manned and trained to perform diversified duties. For example, a 95-foot patrol boat has a primary mission of search and rescue, but other duties it regularly performs include relighting extinguished lights on buoys and fixed light structures, transporting supplies to isolated light stations, boarding small fishing vessels and pleasure craft to insure compliance with safety regulations, investigating suspected violations of the oil pollution laws, and many others. This same concept applies to operational shore units as well as vessels.

Although one of its advantages is a reduced capital expenditure requirement, the multi-mission nature of operational units has created complexities in administrative and budgetary matters. These will be discussed in greater detail in subsequent chapters.

---

[1] Organization Manual, p. 1-4.

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Card Data

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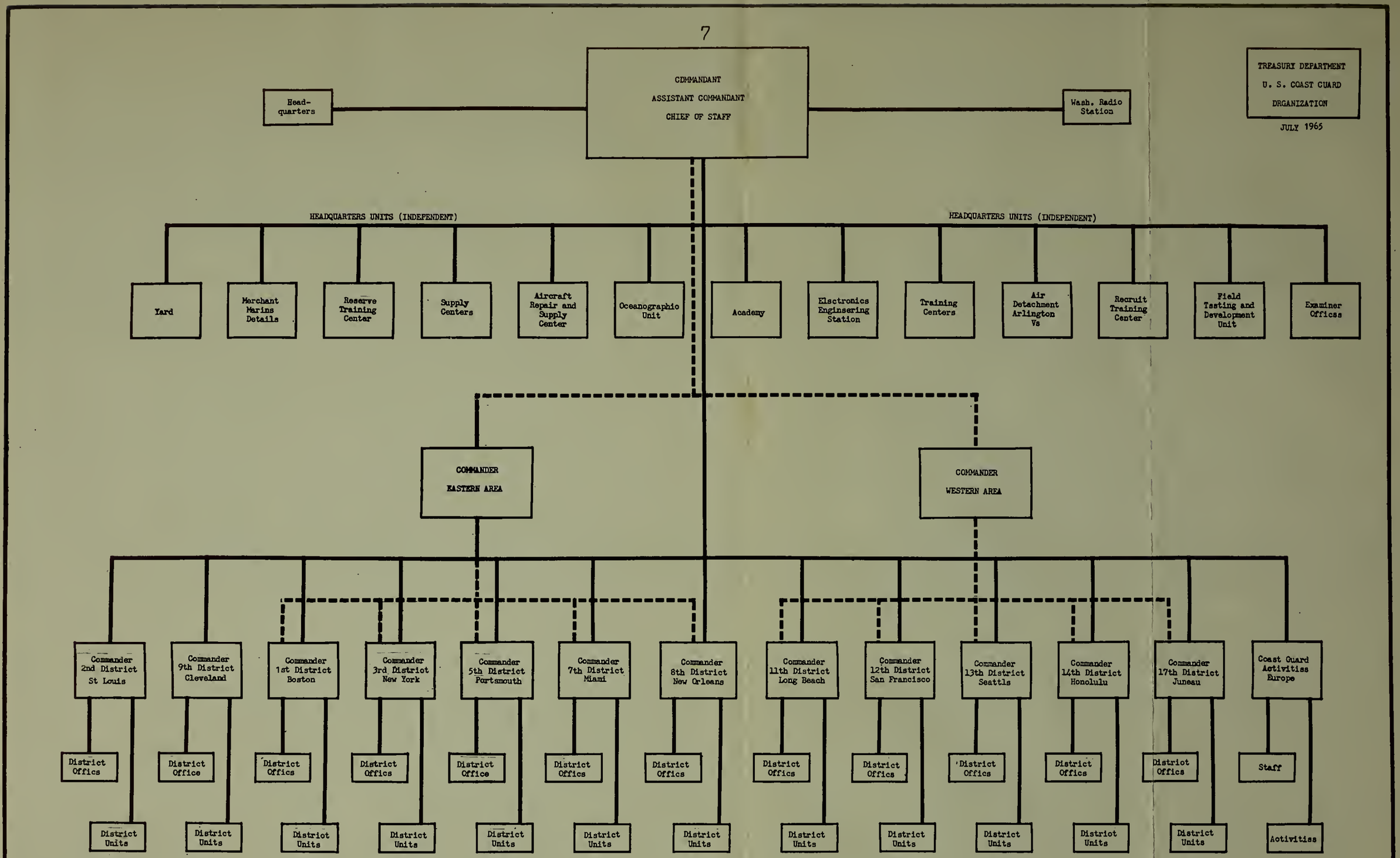
COMMANDANT
ASSISTANT COMMANDANT
CHIEF OF STAFF
Head-quarters
Wash. Radio Station
TREASURY DEPARTMENT
U. S. COAST GUARD
ORGANIZATION
JULY 1965
HEADQUARTERS UNITS (INDEPENDENT)
HEADQUARTERS UNITS (INDEPENDENT)
Yard
Merchant Marine Details
Reserve Training Center
Supply Centers
Aircraft Repair and Supply Center
Oceanographic Unit
Academy
Electronics Engineering Station
Training Centers
Air Detachment Arlington Va
Recruit Training Center
Field Testing and Development Unit
Examiner Offices
COMMANDER EASTERN AREA
COMMANDER WESTERN AREA
Commander 2nd District St Louis
Commander 9th District Cleveland
Commander 1st District Boston
Commander 3rd District New York
Commander 5th District Portsmouth
Commander 7th District Miami
Commander 8th District New Orleans
Commander 11th District Long Beach
Commander 12th District San Francisco
Commander 13th District Seattle
Commander 14th District Honolulu
Commander 17th District Juneau
Coast Guard Activities Europe
District Office
District Units
Staff
Activities
Normal Channel of Control
Special channel for control of operational matters (primarily rescue and assistance) requiring positive action to coordinate forces of more than one district.

Fig. 1

Commandant

As the senior officer of the Coast Guard, the Commandant is responsible for the overall performance of the Service and reports to the Secretary of the Treasury, or the Secretary of the Navy when the Coast Guard is operating under that department. Under the guidance of the cognizant Secretary, the Commandant "directs the policy, legislation and administration of the Service . . ."[1]

The immediate assistants to the Commandant are the Assistant Commandant, Chief of Staff, and their staffs. Reporting to the Chief of Staff are the Chiefs of six functional offices. The present organization of the staff of Coast Guard Headquarters is shown in Figure 2. Responsibilities of the major staff components are:

> The Chief of Staff coordinates policy and program development and exercises general management and policy control for the Commandant within the Service at large.
>
> The Office of the Comptroller has staff responsibility for the logistics of the Service which involve the maintenance of accounts, the disbursement of funds, the audit and examination of accounts, the provision of data processing, and the sufficiency of the supply program including the procurement, storage, and distribution of equipment, supplies, and services.
>
> The Office of Engineering has staff responsibility for the logistics of the Service which are of an engineering character, including the design, construction, repair, maintenance, outfitting, and alteration of vessels, aircraft, aids to navigation, shore establishments, machinery, electronic equipment, and utilities.
>
> The Office of Merchant Marine Safety has staff responsivility for the program for prevention of marine casualties, including the inspection of merchant vessels

---

[1] Ibid., p. 2-2.

Commandant

As the senior officer of the Coast Guard, the Commandant is responsible for the overall performance of the Service and reports to the Secretary of the Treasury. In the absence of the Secretary of the Treasury from the Coast Guard is operating under [illegible] Under the guidance of his assistant Commandant, the Commandant "directs the policy, initiation and administration of the Service . . ."[1]

The responsibility associated to the Commandant are the assistant Commandant, Chief of Staff, and Senior Staff. Responsibility to the Chief of Staff are the Chiefs of six Directorates offices. The General organization of the Coast Guard Headquarters is shown in figure 3. Responsibilities of the major staff components are:

The Chief of Staff coordinates policy and programs development and evaluates policies, objectives and policy concepts for the Commandant within the framework of long-

The office of the Comptroller has staff responsibility for the budgetary aspects of the Service, including the preparation of programs, the allocation of funds and resources of agencies, the [illegible] of fiscal procedures, and the maintenance of [illegible] of the agency's financial transactions, and [illegible], the distribution of equipment, supplies, and services.

The office of Engineering has staff responsibility for the [illegible] of the Service units and of engineering standards, [illegible] the design, construction, [illegible], and [illegible] of vessels, aircraft, and electronic equipment, and [illegible].

The office of Personnel [illegible] has staff responsibility for the [illegible] of civilian personnel, including the [illegible]

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[1] Ibid., p. 4-2.

Chart C

TREASURY DEPARTMENT
U. S. COAST GUARD
HEADQUARTERS ORGANIZATION

JULY 1965

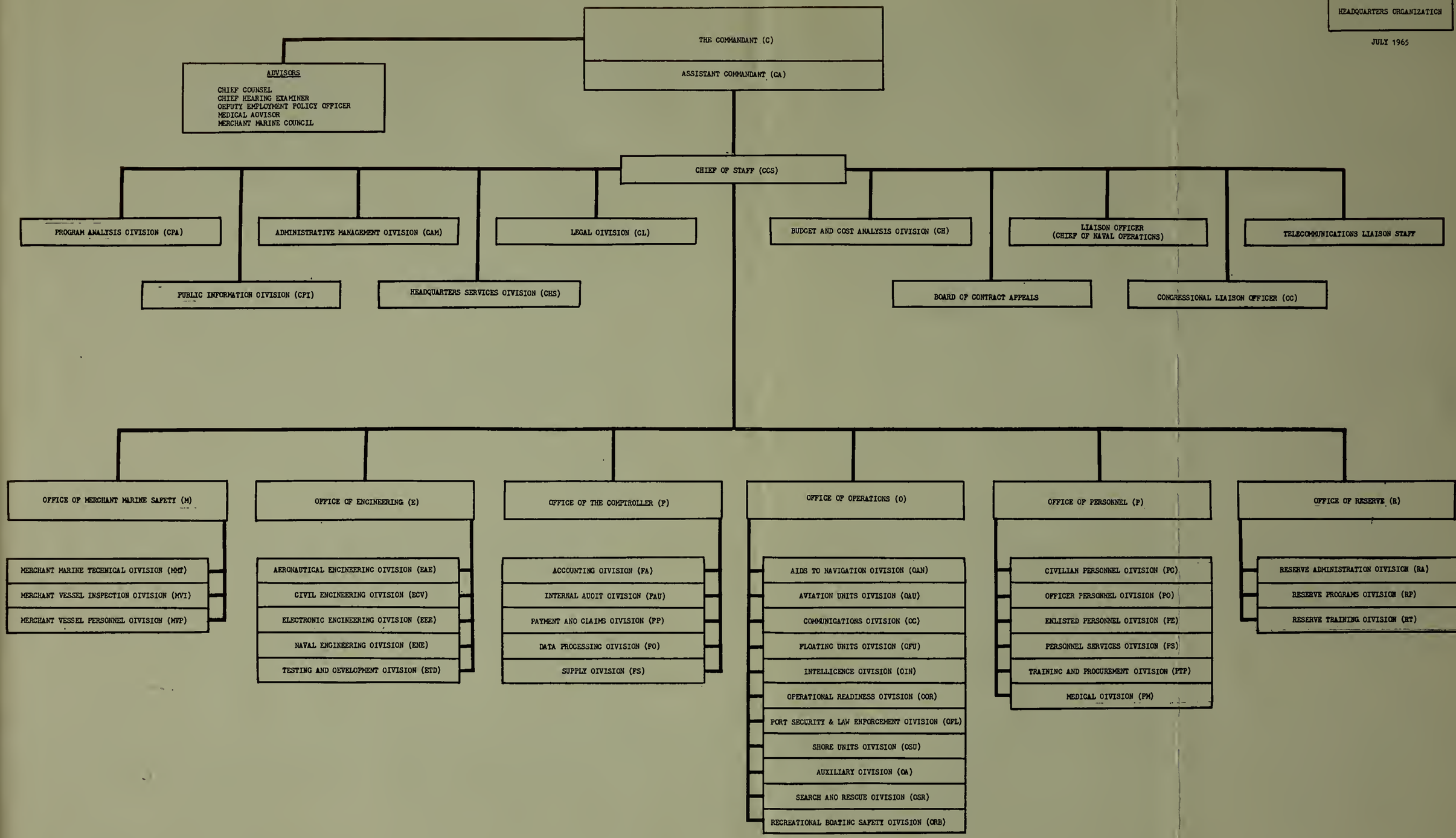

Fig. 2

to insure compliance with established standards, approval of vessel plans and equipment and the development and application of standards for merchant marine personnel.

The Office of Operations has staff responsibility for the operational adequacy of the Service in connection with the saving of life and property . . ., the provision of aids to navigation, maritime law enforcement, general military readiness, and the Coast Guard Auxilliary program.

The Office of Personnel has staff responsibility for the logistics of the Service which are of a personnel nature, including procurement, training, assignment, and separation of personnel, and the provision of medical and morale service.

The Office of Reserve has staff responsibility for the Reserve logistics of the Service that are of a personnel nature including the training, assignment and separation of inactive Reserve personnel.[1]

Chief of Staff

The Chief of Staff occupies a position in the Headquarters staff hierarchy that is the focal point for Coast Guard activities and programs. The Commandant and Assistant Commandant look to the Chief of Staff as their principal management advisor and through his office they keep informed on the problems encountered and progress made in carrying out the policies and programs of the Coast Guard.

General responsibilities of the Chief of Staff include:

The initiation, development, and review of basic policies and programs for the Service, including the legislative programs, and for the control and coordination of plans and activities evolving therefrom . . .[2]

In addition, the Chief of Staff is directly responsible for the preparation, presentation and execution of the budgetary program of the Coast Guard.

---

[1] Ibid., pp. 2-3, 2-4. [2] Ibid., p. 2-15.

The Chief of Staff has control over several echelons. In addition to having the chiefs of special divisions and special assistants under his direct supervision, the Chief of Staff exercises general supervision over the chiefs of offices at Headquarters and the district commanders. The primary purpose of this wide span of control is to secure "effective coordination among the Headquarters staff, and between the Headquarters staff and the Service at large."[1]

Although the Chief of Staff is much involved with the plans, programs, and budgets of the Coast Guard, the day to day work and hub of activity in these functional areas is conducted primarily in two of the special staff divisions directly under him--Program Analysis Division and Budget and Cost Analysis Division. The formal responsibilities of these divisions are set forth in Figures 3 and 4 which are functional organization charts.

---

[1] Ibid.

---

[1] Ibid.

TREASURY DEPARTMENT

U. S. COAST GUARD HEADQUARTERS

CHIEF OF STAFF

PROGRAM ANALYSIS DIVISION

PROGRAM ANALYSIS DIVISION

Keep under review current and proposed appropriations and make recommendations for program adjustments where warranted.

Establish personnel allowances, as permitted by existing limitations, to meet manning requirements.

Coordinate the review and modification of existing programs and planning for new programs.

Initiate or review pertinent legislation.

Coordinate long range plans and program objectives; coordinate and expedite planning where Chiefs of Offices have joint responsibility.

PROGRAM BRANCH

Analyze and review current and proposed programs of the Coast Guard.

Develop annual budgetary programs and prepare or coordinate preparation of budget justification information.

Initiate and develop planning for new programs as directed.

Maintain in current form and order of priority the Advance Construction Program.

Initiate or review pertinent legislation.

PERSONNEL ALLOWANCE BRANCH

Determine manning requirements; establish, review and revise military and civilian personnel allowances for all Coast Guard units in conformance with statutory and fiscal limitations.

Prepare personnel allocation plans in support of the several stages of the annual budget request.

Conduct studies, recommend policies and institute programs to improve manpower utilization and control.

LONG RANGE PLANS BRANCH

Develop, propose and implement long range planning criteria, policy and mission standards.

Coordinate development, proposed revision and dissemination of Master Facilities Requirements Plans and their supporting plans.

Maintain and coordinate proposed revision to Coast Guard objectives for all planning purposes.

Fig. 3

(Signed)

E. D. SCHEIDERER, CAPT, USCG
Chief, Program Analysis Division

(Signed)

P. E. TRIMBLE, RADM, USCG
Chief of Staff

16 JUN 1965

Date Approved

TREASURY DEPARTMENT

U. S. COAST GUARD HEADQUARTERS

CHIEF OF STAFF

BUDGET AND COST ANALYSIS DIVISION

BUDGET AND COST ANALYSIS DIVISION

The Chief, Budget and Cost Analysis Division is responsible for:

1. Supervising and directing the translation of programs and policies into budgets, and the subsequent coordination, execution and review of these budgets among subhead administrators.

2. Assisting in the budget presentation at Treasury, Bureau of the Budget and Congressional Hearings.

3. Maintaining necessary liaison with other Government agencies regarding program estimates and related matters.

BUDGET BRANCH

1. Develops budget estimates, assuring that they properly reflect the financial requirements of the Coast Guard.

2. Prepares instructions to Districts, Headquarters Units, and Offices and Divisions at Headquarters, relating to the preparation of budget estimates, reporting international transactions, payroll and employment.

3. Prepares financial plans, issues allotments to Headquarters Divisions and field units, and prepares requests for apportionment and reapportionment of funds including establishment and release of reserves.

4. Receives and considers requests from field units for changee in allotments and forwards to appropriate division with pertinent comments. Upon recommendation from division concerned, prepares reply or approves allotment modification.

5. Recommends changes to the financial plans to meet changing fund requirements resulting from changes to the programs as they progress. Review requests for changes to the financial plan submitted by subhead administrators and recommend action necessary.

6. Determine the budgetary cost factors upon which the Service's fund requirements should be developed.

7. Prepares budgetary reports as required by the Congress, Bureau of the Budget and Treasury Department; and prepares such other reports as may be required for internal administrative use.

8. Administers funds not specifically allocated to other components of organization.

9. Prepares, publishes and maintains the Manual of Budgetary Administration, CG-255.

10. Prepares schedules on Coast Guard public works programs, including budgetary programs, programs reports and inventory of projects.

COST ANALYSIS BRANCH

1. Develops cost analysis principles, policies and procedures.

2. Evaluates and interprets cost data and furnishes periodic and special reporte for management, i.e. Financial Management, Floating Units, and others.

3. Integrates selected etatietical data with cost data and relates various available indices of activity and performance effectiveness to costs.

4. Develops cost history as a partial baeis for the development of coet standards upon which the Coaet Guard budget estimates can be developed and justified.

5. Coordinates cost analysis and control requirements of other Divisions and Offices.

6. Provides advice and service to and aesist field activities to assure uniform cost reporting and maximum utilization of cost data as a tool to management.

7. Administers funds for Military Pay and Allowances, including the preparation of Financial Plans and issuance of obligations.

8. Prepares special studies and projects as directed by the Chief and Aesistant Chief of the Divieion.

Fig. 4

(Signed)
W. H. BOSWELL, CDR, USCG
Chief, Budget and Cost Analysis Division

(Signed)
P. E. TRIMBLE, RADM, USCG
Chief of Staff

23 JUL 1965
Date Approved

CHAPTER II

MOVEMENT TOWARD A COAST GUARD PROGRAM BUDGET

External Factors

Hoover Commissions

The First Hoover Commission in 1949 found that there was a great need to reform the method of budgeting and the appropriation structure in the Federal Government. According to the Commission, "the Federal budget is an inadequate document, poorly organized and improperly designed to serve its major purpose . . ."[1] The major budgeting reform proposed by the Commission was contained in its Report on Budgeting and Accounting, recommendation number one:

> We recommend that the whole budgeting concept should be refashioned by the adoption of a budget based upon functions, activities, and projects: this we designate as a "performance budget."[2]

Such an approach, the Commission maintained, would focus on the general nature and relative importance of services to be rendered or work to be done, rather than the procurement of items such as equipment, supplies and services. Thus, the core

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[1]U. S., Commission on Organization of the Executive Branch of Government, Budgeting and Accounting: A Report to Congress (Washington: Government Printing Office, 1949), p. 7.

[2]Ibid., p. 8.

of the recommendation was that the budget should be oriented towards accomplishments through use of resources instead of the resources themselves. The Budget and Accounting Procedures Act of 1950 made this recommendation a legislative requirement; however, the details and extent to which the concept would be applied were left to the discretion of the President.[1]

Among the principal recommendations regarding Federal budgeting practices made by the Second Hoover Commission were, "(1) continued use of performance budgeting, (2) formulation and administration of agency budgets on a cost basis."[2] A cost based budget identifies the costs of programs planned by an agency in terms of the goods and services consumed by each activity. Balances of goods and services on hand that have been obtained from prior appropriations and the extent to which these resources have been planned for proposed programs are disclosed by cost-type budgets.

The approved recommendations of the Second Hoover Commission providing for improvements in budgeting, accounting and appropriation procedures were enacted by Public Law 84-863 in 1956. Section 2(a) of that act directs:

> The head of each executive agency shall, . . . take whatever action may be necessary to achieve . . . (1) consistency in accounting and budget classifications, (2) synchronization between accounting and budget classifications and organizational structure, and (3) support of

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[1]U. S., Congress, Senate Document No. 11, 87th Cong., 1st Sess., Financial Management in the Federal Government: A Comprehensive Analysis of Existing and Proposed Legislation Including Financial Management Improvements Made on a Government-wide basis, 1961, p. 81.

[2]Ibid., p. 53.

the budget justifications by information on performance and program costs by organizational units.[1]

Coast Guard Roles and Missions Study

Soon after assuming his duties as Secretary of the Treasury in 1961, Douglas Dillon became concerned about the capital resources of the Coast Guard--shore stations, ships, aircraft--many of which had become obsolete and were rapidly deteriorating. Long range requirements projected a need for over one billion dollars to fund a phased capital expenditure program.[2] This requirement was of great magnitude for the Coast Guard in the light of its capital expenditure appropriation history--a total of slightly over one hundred million dollars for the fiscal years 1954 through 1961.

Compounding this problem was the lack of overall policy guidelines. Enactment of Title 14 of the United States Code in 1949 was a welcome document because for the first time the responsibilities, functions and spheres of activity of the Coast Guard were spelled out. However, while telling the Coast Guard what to do, Title 14 "left all details of operation, programming, and funding to be worked out by the Coast Guard and its multitude of cooperating agencies."[3] To correct this situation, Secretary

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[1] Ibid., p. 281.

[2] U. S., Treasury Department, U. S. Coast Guard: A Study of its Origin, Responsibilities, Relationships and Direction (Washington: Government Printing Office, 1963), p. 1.

[3] Ibid., p. 6.

the Supreme Court's reluctance to intervene in controversies
and disputes which do not affect individual rights.[1]

Coast Guard Boarding

Operating Area:

Prior to 1971, Section 89(a) of Title 14 of the United States Code provided that the Coast Guard could board vessels subject to the jurisdiction of the United States and make inquiries, examinations, searches, seizures, and arrests for violations of the laws of the United States. This section was interpreted to authorize boardings on the high seas and within the territorial waters of the United States.[2] This authority was exercised without regard to the probable cause standard normally required for searches and seizures by law enforcement officials. For the Coast Guard, this freedom was important in the light of its marine safety and search and rescue responsibilities. Therefore, in order to avoid the uncertainty that would result from a decision requiring probable cause for boarding, Congress, with the passage of the Coast Guard Authorization Act of 1971, amended section 89(a) of Title 14 to read as follows:

"For the purpose of ensuring the safety of vessels subject to the navigation laws of the United States, the Secretary may make inquiries, examinations, searches, seizures, and arrests upon the high seas and waters over which the United States has jurisdiction, for the prevention, detection, and suppression of violations of laws of the United States. For such purposes, he may go on board any vessel at any time, and may hail it by signal or radio, stop it, direct it to proceed to a port or place for boarding, and use force necessary to compel compliance."[3] To prevent this statute from

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[1] Ibid., p. 20.

[2] See [illegible]

[3] Ibid., p. 21.

Dillon "concluded that a comprehensive study of the Coast Guard's roles and missions, together with a review of existing policy and operational guidelines would be helpful in deciding our course of action."[1]

Thus, at the Secretary's direction a study of the Coast Guard was begun in September 1961 by an inter-agency group having representatives from the Bureau of the Budget, Department of Defense, and Treasury Department. The group submitted its report to the Secretary in June 1962 making eighty recommendations. In approving the report on September 18, 1962, Secretary Dillon directed specific action on all but four of the recommendations.[2]

While the majority of the recommendations were confined to policy and operational guideline considerations, several dealt with matters internal to the Coast Guard which are particularly pertinent to this study. Specifically, the report recommended that:

> An operations research study be conducted for use by the Coast Guard in developing a coordinated long-range plan for total mission accomplishment as a logical operational planning step.[3]
>
> Recognizing the multi-functional nature of Coast Guard operations, a suitable basis be developed to determine program costs against which to measure performance.[4]

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[1] Ibid., p. 1.

[2] U. S., Treasury Department, Study of Roles and Missions of the United States Coast Guard: Report to the Secretary, June 1962 (7 vols.; Washington: Government Printing Office, 1963), I, foreward, no page no. Cited hereafter as Roles and Missions Study.

[3] Ibid., I, p. C-74. [4] Ibid., p. D-94.

While each of these recommendations was made for a specific mission area of the Coast Guard, there is some evidence supporting a contention that a broader application was implied. Interviews with members of the project staff of the Roles and Missions Study group on the intent of the second recommendation caused one student to state:

> That they were referring to a broad program element--the cost of performing the Aids to Navigation mission of the United States Coast Guard; second, that the recommendation should not be restricted to this one mission area to which it was directed in this report--cost data should be developed for all of the missions performed by the United States Coast Guard.[1]

Program Budget Pilot Study

Responding to a request by the Treasury Department, the Chief of Staff of the Coast Guard in June 1963 directed that a program oriented budget be developed on a pilot basis.[2] In requesting this action, the Treasury Department was supported by the legislative requirements resulting from the Hoover Commission's budget reform recommendations and the general recommendations made by the Coast Guard Roles and Missions Study Report discussed earlier in this chapter. To conduct the pilot study, a Budget Advisory Group was established consisting of the

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[1]Thomas E. Hawkins, "Mission Oriented Management by the United States Coast Guard" (unpublished Master's thesis, School of Government, Business and International Affairs, The George Washington University, 1964), pp. 66-67. The author is a Commander, USCG and currently is Chief, Long Range Planning Branch, Program Analysis Division at CG Headquarters.

[2]U. S., Coast Guard, Chief of Staff Memorandum to Chiefs, Offices and Divisions, Development of a Program-Oriented Budget as a Pilot Study, June 25, 1963, p. 1.

Comptroller; Assistant Chief, Office of Operations, Facilities and Services; and Chief, Program Analysis Division. A four-man working group was appointed by the Comptroller from members of his staff. Three were senior staff members in the Budget and Cost Analysis Division and the fourth was the Fiscal Assistant to the Comptroller.[1]

Premises and Goals

The basic tasks confronting the Program Budget Working Group were to develop sound methods of calculating and distributing direct and indirect costs on a program basis, and to minimize the percentage of indirect costs. The working group initially adopted the ten mission categories cited by the Roles and Missions Study as the program of the Coast Guard because these categories were generally acceptable to the Treasury Department and the Bureau of the Budget. "An additional budget activity 'Supporting Facilities and Services' was established for . . . costs whose distribution to specific programs proved impractical."[2]

To develop and distribute program costs the Program Budget Working Group considered two basic alternatives: (1) Completely overhaul the existing accounting system so that

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[1]U. S. Coast Guard, Comptroller Memorandum to Chief of Staff, Establishment of Working Group to Conduct Program Budget Pilot Study, July 3, 1963, p. 1. At the time of the pilot study the Budget and Cost Analysis Division was under the Comptroller in lieu of the Chief of Staff, as present.

[2]U. S. Coast Guard, Pilot Study to Develop Program Budget, March, 1964, p. 18. Cited hereafter as Program Budget Pilot Study.

program costs would be a direct end product, and (2) Merge existing accounting data and operational data using a statistical method. The first alternative was rejected because of the high degree of complexity and cost entailed, coupled with the belief that some proration would be inevitable. Thus, the second alternative was adopted:

> The approach that was adopted was to retain the present techniques of cost accumulation, which have been serving the needs of management, but to distribute the resulting class of unit costs by programs or missions based on the best workload factors available consistent with sound and accepted accounting principles. There was nothing unusual in this approach since modern management cost systems in industry almost without exception prorate or assign costs. The problem usually evolves into the developing of suitable proration factors which are statistically oriented. A program budget therefore, is a blend of accounting and statistics.[1]

Concentrating on the Operating Expense Appropriation of the Coast Guard, the Program Budget Working Group analyzed the fiscal year 1962 cost-accounting data and workload data for each of the eight functional budget activities under the appropriation. Figure 5 compares these budget activities, the roles and mission categories, and the program budget activities ultimately selected. Recognizing that the cost of certain units did not lend themselves to mission program distribution, the Program Budget Working Group established an initial goal of distributing eighty percent of the Coast Guard operating costs to mission programs with the remainder costed to the Supporting Facilities and Services Program.[2]

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[1] Ibid., p. 17.

[2] Ibid.

Existing Budget Activities	Roles and Missions Categories	Program Budget Activities
1. Vessel Operations	1. Search and Rescue	1. Search and Rescue
2. Aviation Operations	2. Aids to Navigation	2. Aids to Navigation
3. Shore Station & Aids Operations	3. Law Enforcement	3. Law Enforcement
	4. Port Security	
4. Repair and Supply Facilities	5. Oceanography	4. Oceanography and Ice Operations
5. Training and Recruiting Facilities	6. Icebreaking	
	7. Military Readiness	5. Military Readiness
6. General Administration and Operational Control	8. Reserve Training	
7. Other Military Personnel Expense	9. Ocean Stations	
8. Supporting Programs	10. Merchant Marine Safety	6. Merchant Marine Safety
		7. Supporting Facilities and Services

Fig. 5--Comparison between then existing budget activities, roles and mission categories, and program budget activities selected.

Cost Distribution Rationale

A summary of the key considerations, parameters, and methodologies that were developed in cost distribution procedures will contribute to a better understanding of the program budget system development.

Vessel Operations. Of the eight existing functional budget activities, vessel operations caused the least difficulty in determining the distribution of costs. The basic proration yardstick adopted was time spent on mission. Data on operating time was available from Quarterly Abstract of Operations reports submitted by each vessel. Unfortunately, mission categories on the quarterly report did not correlate exactly with those of the Roles and Missions Study; however, there was sufficient correlation to justify use of this data on a pilot basis. With cost data available for each vessel and consolidated operating-cost summaries by type vessel, there was little difficulty in converting mission hours to mission costs.

Since vessels are not underway 100 percent of the time, the question arose of how to treat standby time and maintenance time. Should standby time, reflecting potential to perform a mission, be allocated to the various mission operating times or should actual operating time be the sole distribution factor? The working group adopted the latter approach disregarding both standby and maintenance time.[1]

Aviation Operations. The distribution of aviation operating costs was handled in much the same way as it was for

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[1]Ibid., p. 23.

Case Classification Summary

A summary of the key considerations, conditions, and circumstances that were discussed in these hypothetical situations is a useful reminder of the complex issues that confront practitioners.

Initial Considerations. Of the client seeking treatment voluntarily, several questions present the most difficulty in determining the appropriate course. The client's competency should be the first issue to address. Does the client have the capacity to understand the nature and benefits of treatment? Competency assessments are rarely simple. Understandably, mental health professionals may not be inclined to certify anyone as incompetent, but there are circumstances in which the client's decision-making capacity is impaired. Some clients may appear to have the capacity to understand treatment options but, because of their mental, emotional, or physical condition, may not be able to make a rational decision.

Given research and our experience, the question of the treating clinician's role in the client's decision is also an important issue. Should clinicians actively participate in treatment decisions, or should they remain neutral? Ethically, clinicians should not impose their own values on clients, but they should help clients understand the issues involved and the options they have.

Confidentiality Considerations. The discussion of confidentiality and its limits in each of these cases is a good tool

vessels, but with one significant difference. At the time of the study, cost data was not accumulated by individual or type aircraft but rather by the air station or detachment to which aircraft were assigned. Because the type of aircraft and number of each type varied considerably among the air stations, distributing costs on a simple mission hour basis was not feasible. Therefore, relative weight factors were developed by the Budget and Cost Analysis Division on the basis of best estimated annual costs of each type aircraft. These weight factors were then applied to the mission hours reported on the Quarterly Abstract of Operations reports submitted by air stations.[1]

Shore Stations and Aids Operations. In considering this budget activity an entirely different approach was required because comparable quarterly operating data was not available. The Program Budget Working Group did not recommend its development because the resultant reporting requirement would "materially add to the already considerable paperwork load of small units."[2]

Even though there was an absence of workload time data, the working group noted that military pay and allowances constituted about 67 percent of the total cost of shore units and aids, and adopted as the distribution yardstick the authorized personnel allowances for each station. Although some difficulties were experienced, it was possible to determine the allocation of billets to specific missions with a reasonable degree of accuracy. Recognizing the artificiality of the approach adopted,

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[1] Ibid., p. 28. [2] Ibid., p. 33.

[illegible]

the working group recommended further study to refine the methodology.[1]

Repair and Supply Facilities. The costs of operating these facilities were considered fixed (indirect) and were assigned entirely to the Support Facilities and Services program.[2]

Training and Recruiting Facilities. With the exception of costs reimbursable from the Reserve Training Appropriation and those costs readily associated with a particular mission program, such as the rifle and pistol detachment, all training and recruiting facility costs were distributed to Support Facilities and Services.[3]

Administration and Operational Control. Charges under this budget activity were almost entirely charged to Coast Guard Headquarters and the district offices. Distribution to programs was based on identification of a Headquarters staff component and its district office counterpart costs with a particular program activity, and to the extent that existing accounting data permitted such distribution. For example, costs for the Offices of Personnel, Comptroller and Engineering were all distributed to Support Facilities and Services; costs for the Offices of Operations, Merchant Marine Safety, and Reserve were distributed throughout all mission programs as appropriate.[4]

Other Military Personnel Expenses. This budget activity included such costs as pay and allowances of recruits and other personnel in training, most travel expenses and recreation.

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[1] Ibid., p. 36.

[2] Ibid., p. 38.

[3] Ibid., p. 41.

[4] Ibid., p. 43.

"The technique utilized for distribution involved a vertical proration to existing budget activities and then horizontally to programs."[1]

Supporting Programs. Costs under this budget activity are associated with particular allotment subheads which are not charged to benefitting units. Examples include costs for transportation of supplies and equipment, replacement of electronic equipment, vehicle procurement and small arms ammunition. As with the Other Military Personnel Expense activity a double proration method was used; however, there was less accuracy because part of the distribution was based on memorandum records maintained by subhead administrators rather than from official books of account. Recognizing that the Supporting Programs budget activity was inconsistent with the program budget concept, the working group proposed:

> That commencing in fiscal 1965, the budget activity Supporting Programs, be eliminated and that the costs be charged to the benefitting units wherever possible. The details of this change are technical and outside the scope of this study. Simplification of our subhead structure is involved.[2]

Final Consolidation and Determination of Program Budget Activities

As mentioned earlier, the Program Budget Working Group initially adopted the Roles and Mission categories as the programs of the Coast Guard. However, as the study proceeded it became necessary to refine and alter these categories for a number of reasons. Adopting the premise that the programs should indicate

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[1] Ibid., p. 51. [2] Ibid., p. 57.

[illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]

the missions of the Coast Guard, the working group stated that:

> The manning of ocean stations is not a mission but is a platform for, or method of, accomplishing SAR, Aids to Navigation, Oceanography, Military Readiness, and for cooperating with the weather bureau. The costs of the ocean station program were, therefore, broken down into components and charged to missions.[1]

The separation of several other Roles and Missions categories was considered artificial due to commingling of facilities and because pairs of certain categories tended to be administered by the same organizational components. The final consolidation adopted is shown on Figure 5.[2]

By using the basic methodology and techniques described above, the Program Budget Working Group was able to distribute 79 percent of the Operating Expense Appropriation to mission programs with the remaining 21 percent distributed to the Support Facilities and Services program, thus achieving their primary objective. A breakdown by percentages of the final distribution is shown on Figure 6.

Other Appropriations

In concluding their report the working group recommended no immediate changes to the budget activities of the three other Coast Guard Appropriations--Reserve Training; Retired Pay; and Acquisition Construction and Improvement. It was recommended that at such time as internal planning was more integrated and output oriented, consideration should be given to converting

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[1] Ibid., p. 9.

[2] Supra, p. 21.

Existing Budget Activity	Search and Rescue	Aids to Navigation	Merchant Marine Safety	Law Enforcement	Oceanography Ice Opns.	Military Readiness	Support Facilities & Services	Total
Vessel Operations	20.4	35.0	-	8.9	15.5	19.8	.4	28.6
Aircraft Operations	38.7	49.1	-	4.6	.6	.3	6.7	10.0
Shore Stations & Aids to Navigation	25.5	42.1	10.5	14.5	.2	-	7.2	25.7
Repair & Supply Facilities	-	-	-	-	-	-	100.0	2.3
Training & Recruiting Facilities	-	-	-	.2	-	37.7	62.1	5.5
Administration & Control	3.6	4.3	6.1	4.3	.3	6.7	74.7	14.0
Other Military Personnel Expenses	19.9	31.5	3.9	8.9	6.1	11.1	18.6	10.0
Supporting Programs	19.6	31.2	4.9	9.1	3.9	17.7	13.6	3.9
Total Distribution	19.6	30.7	4.1	8.6	5.4	10.6	21.0	100.0

Fig. 6--Operating Expenses, Fiscal Year 1962 (percentages), Comparison Between Former Functional Activities and New Program Budget Activities

[illegible]

the Acquisition, Construction and Improvement appropriation to a program format along mission lines.[1]

Summary and Appraisal

Apart from the cost distribution methodology that was developed, the major points relating to program budgeting brought out by the study can be summarized as follows:

1. The Coast Guard, generally speaking, was organized on a functional basis rather than by mission.

2. The accounting and fund control systems were functionally or facility oriented with no regard for missions.

3. The Roles and Missions Study identified the mission areas or output categories of the organization.

4. Each of the integrated resources (men, equipment and facilities) may provide inputs to several missions being of multi-purpose nature.

5. The operational information system did not gather all required data relating to mission performance.

6. The accounting system was not capable of providing information which permitted the relating or keying of resources to missions.

7. The programming/planning system did not provide meaningful quantitative mission objectives, so that alternatives could not be considered optimally.[2]

The study revealed potential anomalies concerning Coast Guard organization as it relates to program budgeting. As one example, it showed that in 1962, the aids to navigation mission cost constituted 30.7 percent of the total operating expense, search and rescue 19.6 percent, and merchant marine safety

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[1]Program Budget Pilot Study, p. 66.

[2]Personal interview with Commander William H. Boswell, USCG, Chief, Budget and Cost Analysis Division, USCG Headquarters, February 11, 1966. Cited hereafter as Boswell interview.

4.1 percent. Organizationally, Merchant Marine Safety is an office level at Headquarters whereas Aids to Navigation and Search and Rescue are divisions of the Office of Operations.[1] Moreover, the control of funds to carry out these missions, with the exception of military and civilian pay, is largely vested in subhead administrators located in divisions of the Office of Engineering. Thus, organizationally the missions are represented by components at different hierarchical levels at Coast Guard Headquarters, and the chief's of mission components generally do not exercise control of funds to accomplish missions over which they have cognizance. This raises the question as to whether the present organizational structure and fund control procedures at Coast Guard Headquarters are consistent with optimum management of an integrated planning, programming, budgeting system.

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[1] Ibid.

[illegible]

CHAPTER III

TOOLING UP

Budgeting

Response to Program Budget Pilot Study

In submitting the Program Budget Pilot Study on March 4, 1964, the Comptroller of the Coast Guard recognized the inaccuracy of certain calculations and suggested that the study be reviewed "from the viewpoint of methodology and technique, rather than finite correctness of dollar amounts."[1] Because of a requirement that the budget for any particular year include actual costs for budget year minus two, 1967 was the earliest budget year for which a program type budget could be submitted. To insure that program costs for 1965 and subsequent years would be more soundly based, the Comptroller recommended the following steps be taken:

> a. Perform the necessary calculations on data processing equipment. The calculations are numerous, tedious and time consuming. Without such assistance, the development of a program budget in the manner proposed . . . is not practical.
>
> b. Revise the Abstract of Operations to accumulate data in a manner which will permit the development of a program budget. The revision to the Abstract will have to satisfy, at the same time, the needs of the Office of

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[1]U. S. Coast Guard, Senior Member, Budget Advisory Group memorandum to Chief of Staff, Transmittal of Pilot Study to Develop a Program-oriented Budget, March 4, 1964, p. 1.

Chapter III

Profile of

Philadelphia

Treasurer to Theatres

Budget Pilot Study

To substitute the Preston Budget Pilot Study on March 6, 1958, the Comptroller of the Penn Theatre requested the temporary or capital expenditure and suggested that the study be revised "from the viewpoint of maximization and economies, rather than fiscal correctness of dollar amounts."[1] Because of a requirement that bids be made for any particular year during actual work for budget year ending June two, 1957 was the initial budget year for which a Preston type budget could be submitted. To inform that program costs for 1957 and subsequent years could be more accurately stated, the Comptroller recommended the following steps be taken:

a. Develop the necessary relationships on daily productivity systems. The adjustments are necessary, because the time consuming, without such adjustment, the operations of a program budget to the manner recommended . . . is not practical.

b. During the duration of Operations to accomplish data in a manner which will permit the simplification of a greater economy. The evaluation to the extent will have to satisfy, at the same time, the needs of the Office of

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[1] J. C. Court Davis, Director Theater, Budget Advisory Group memorandum to Chief of Staff, Theaterwide of City Study as Operate a Theater-Wide Budget Study, March 6, 1957, p. 1.

Operations for the review of current operations and the needs of long range planning.

c. Revise the accounting system to more adequately present the cost of aircraft and to permit the direct charging of Supporting Programs to benefitting units.

d. The Personnel Allowance Sheets of shore units should be revised to insure they reflect the present employment of personnel. Further research in this area is required.[1]

During March 1964 a number of briefings and visual presentations were held for the Commandant and other top management officers and civilian officials. A number of questions were raised, mainly concerning certain details of cost distribution methodology. With the beginning of fiscal year 1965 rapidly approaching, the Chief of Staff approved the Program Budget Pilot Study on April 2, 1964, subject to modification of details. A time schedule was set and organizational responsibility was defined for revising information systems necessary to implement the system.[2]

Modification and Initial Implementation

In implementing the Program Budget Pilot Study, Coast Guard officials decided to use the evolutionary approach. Several major criteria were established. First, there would be no major changes in organization or fund control. Second, costs would continue to be collected by facility rather than have the Coast Guard undertake a complete revision of the existing accounting

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[1] Ibid., pp. 1, 2.

[2] U. S., Coast Guard, Chief of Staff memorandum to Chiefs Offices of Operations, Engineering and Comptroller, April 2, 1964, p. 1.

operations for the review of economic operations and the
needs of local range planning.

4. Develop the accounting system to more adequately
measure the cost of attempts and to permit the timely
analysis of theoretical programs to beneficiary units.

5. The procurement allowance levels of these units
should be revised to insure they reflect the present
environment of personnel. Further research in this area
is required."

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presentations were held for the Commandant and other key command-
ment officers and visiting officials. A number of questions were
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methodology. With the beginning of fiscal year 1965 rapidly
approaching, the Chief of Staff approved the Project Budget
Plans Study on April 2, 1964, subject to modification of details.
A line economic was set and organizational responsibility was
defined for periodic information system updating to implement
the system.[3]

Modification and Initial

Implementation

In subsequently the Program Budget Plans Study, Comptroller
Issued official notices to use the consolidated procedure. Several
major activity were established. First, there would be no major
changes in organization or fund control. Second, unit world
continue to be maintained; Facility Number Plan Code Plan,
would reflected a complete revision of the existing accounting

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[3]Ibid., pp. 1, 2.

[4]U. S., Coast Guard, Chief of Staff Memorandum to Chiefs
Offices of Operations, Engineering and Comptroller, April 3, 1964,
p. 1.

system to establish program cost collection centers. To the extent possible, costs previously undistributed to facilities would be distributed; other minor but necessary changes to the accounting structure would be made. Finally, new reporting requirements at the field level would be minimized to the extent possible.[1]

The Chief of Staff promulgated a supplement to the Program Budget Pilot Study in June 1964 which modified several cost distribution concepts and set forth accounting improvements that would be made to better support the program budget.[2] Mission standby hours, defined as standby on call for six hours or less for vessels and two hours or less for aircraft that could be identified to a specific mission, would be added to actual operating hours in distributing aircraft and vessel costs. Collecting costs by aircraft model would be tested at several air stations during fiscal year 1965. Servicewide program expense accounts would be established for costs not associated with the maintenance and operation of a specific unit other than personnel costs.

As a further improvement, four allotment subheads would be eliminated, expenses combined with other subheads, and charged to benefitting units. Expenses of several other subheads which had been charged to the Supporting Programs budget activity would

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[1]Boswell interview.

[2]U. S., Coast Guard, Chief of Staff memorandum to Holders of Program Budget Pilot Study, Supplement to Program Budget Pilot Study, June 10, 1964, p. 1.

be charged to benefitting units or Servicewide program accounts.[1]

The basic ground rules having been established, the next step was to revise the administrative machinery. During May and June 1964, revised forms and instructions were developed and issued to insure that workload and fiscal data would be collected and reported commencing July 1, 1964, the beginning of fiscal year 1965.

A substantial task that remained was to transfer the distribution of costs to the newly established program budget activities from a manual to an electronic data processing system. Existing IBM 1410 computer hardware at Headquarters was adequate; therefore the primary job was system design and writing computer programs. Because of a shortage of talented programming personnel and the complexity of the programming problem, by February 1965 only the vessel and aircraft costs had been programmed. Remaining programs were completed several months later with approximately two man-years of effort expended on the total initial programming.[2] According to the Chief, Budget and Cost Analysis Division, computer programming was the biggest problem area in implementing the program budget.[3]

In June 1965 an organizational change related to the functioning of the program budget was made at Headquarters. For a number of years prior to that time the Budget and Cost Analysis

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[1]Ibid., Enclosure (1), p. 1-6.

[2]Personal interview with Commander Otto F. Unsinn, USCG, Chief, Data Processing Division, USCG Headquarters, February 17, 1966.

[3]Boswell interview.

Division was a component under the Comptroller. As management responsibilities became more complex, direct contact between the Budget Division and Chief of Staff components became essential to successful handling of priority programs. Recognizing this formal organizational anomaly, the Chief of Staff wrote:

> Due to the increase in numbers of programs to be budgeted for; the wide variety of timely analyses required for proper management decisions which must tie in with day-to-day refinements in top-level policy; and the greater significance of long and short-range plans which must reflect the marriage of programs and their related budgets; it is essential that direct lines of communications with budget and cost personnel be facilitated. . . . To . . . align our organization in theory to what is necessarily developing in practice, it is proposed that the Budget and Cost Analysis Division be moved to the Office of the Chief of Staff.[1]

The Comptroller, while noting the existence of the organizational anomaly and the advantages of the Chief of Staff's proposal, suggested that the feasibility of a movement in the opposite direction be studied--place the Programs Branch and Personnel Allowance Branch under the Comptroller following modern trends in both government and business.[2] However, over the objection of the Comptroller, the Budget and Cost Analysis Division was transferred to the Chief of Staff on July 1, 1965.[3]

The date July 1, 1965 was significant to the program budget for another reason. As a result of the feasibility test that was started the previous July 1, accounting instructions

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[1]U. S., Coast Guard, Chief of Staff memorandum to Comptroller, Transfer of Budget Function, March 18, 1965, p. 1.

[2]U. S., Coast Guard, Comptroller Memorandum to Chief of Staff, Transfer of the Budget Function, March 31, 1965, p. 1.

[3]U. S., Coast Guard, Headquarters Notice 5430, Transfer of Budget and Cost Analysis Division, June 15, 1965, p. 1.

were promulgated providing for cost distribution by aircraft model throughout the Coast Guard.[1]

In the fall of 1965, formal budget estimates for fiscal year 1967 had to be prepared for submission to the Treasury Department for ultimate review by the Bureau of the Budget. In the Coast Guard budget process, this step is known as the "BuBud Stage" submission or fall Review. Because of the normally short time period between receipt of monetary limitation target amounts from the Treasury Department and the budget document submission date, coupled with a revised budget format incorporating program activities, the Budget and Cost Analysis Division used a PERT (Program Evaluation Review Technique) layout to assist in preparing the BuBud Stage document. With about one hundred separate events in the process, many of which had six or seven inputs, the use of PERT proved highly beneficial.[2]

After receipt of Presidential allowances based on the review of the "BuBud Stage" document, the Coast Guard program budget's initial implementation was culminated with the submission of the Congressional Stage document on December 20, 1965.[3] This document was submitted to the Bureau of the Budget via the Treasury Department and was consolidated and incorporated into the budget sent to Congress by the President.

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[1] U. S., Coast Guard, Comptroller Manual (CG-264), Vol. I, Amend. No. 77, July 1, 1965, p. 2.

[2] Boswell interview.

[3] U. S., Coast Guard, Budget Document for Fiscal Year 1967, December 20, 1965.

Planning-Programming

Aside from the introductory chapter on Coast Guard history, missions, and organization, the discussion thus far has been primarily about the budgetary aspects of the Coast Guard's program budget development. However, budgeting is only one aspect of the overall process of obtaining financial resources needed to accomplish the missions of an organization.

The budget document sent to Congress must be supported by programs reflecting manpower and materiel resource requirements. Programs are developed from plans that delineate actions and broad requirements needed to accomplish specified objectives. Therefore the processes of planning and programming are integral to the development of a mission oriented budget.

Facility Requirement Plans

During the retrenchment years immediately following the Korean conflict, the Coast Guard was generally unsuccessful in taking major corrective action on the widespread obsolescence of its physical plant--aircraft, vessels and shore units. However, as a result of the drastic consequences of an aircraft failing in flight, it was able to budget for and obtain funds to replace several of its oldest and most deteriorated aircraft. Desirous of a long-range plan for the orderly replacement of aircraft rather than the apparent hit or miss annual requests, the House Appropriations Committee, in its spring 1957 report to Congress on the Treasury Department's appropriation request for fiscal year 1958, deleted all funds for Coast Guard aircraft. "The committee stated that after the Treasury and Coast Guard had

Capital Improvements

Aside from the information centers on Coast Guard stations, stations, and aviation, the Director also has two budget projects under the Judiciary account of the Coast Guard's program budget development. However, budgeting is only one aspect of the overall problem of obtaining financial resources to accomplish the mission of an organization.

The budget document used to Congress must be supported by previous negotiated decisions and material resource requirements. Programs like drug-related law enforcement and broad deployments needed to accomplish unrelated missions. Therefore the procedures of planning and programming are involved in the development of a viable project budget.

Facility Construction Plans

During its refurbishment period Coast Guard Headquarters realizes, the Coast Guard has generally concentrated on major major improvements on the aforementioned requirements for improved, cost-effective, reliable and safer units. However, as a result of the drastic consolidation of an aircraft facility, it was able to budget for and obtain funds to replace several of its aging and more obsolescent aircraft. Instead of a long-range plan for the orderly replacement of aircraft rather than the opposite, as we have usually previously, the House Appropriations Committee, in its letter report to Congress on the Treasury Department's appropriation request for fiscal year 1978, ordered all funds for final study stopped. The committee stated that after the testing and study phase is

presented a long-range plan to congress for aviation facilities and aircraft, funds could be requested for its implementation."[1]

Fortunately, an ad hoc board of senior officers at Coast Guard Headquarters had been appointed in 1956 to determine the aviation requirements of the Service. The report of this board, which was approved with a few minor changes by the Commandant and the Secretary of the Treasury, was transmitted to Congress in mid-1957. The House Appropriations Committee held special hearings on an addendum budget in July 1957 that ultimately resulted in the restoration of funds for aircraft procurement. Thus, Coast Guard aviation "was now on a firm basis, with a well-defined goal, and a financial plan approved by the Treasury Department and tacitly agreed to by the House Appropriations Committee."[2]

Because of the status of the Aviation Requirements Report and the recognition that requirements for urgent replacement of vessels and shore establishments were becoming more demanding, it was obvious that plans for vessels and shore units carrying the same authority as the aviation plan were necessary. In September 1957, Assistant Secretary of the Treasury David W. Kendall requested the Commandant to prepare reports on the requirements for vessels and shore units "setting forth a program of comprehensive projected needs showing financing, necessities, obsolescence, new missions and future needs."[3]

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[1] Capron, p. 200. [2] Ibid., p. 201.

[3] U. S., Coast Guard, Commandant Instruction 5441.3, Report on the Requirements for Coast Guard Vessels, November 1959 as amended June 1962, October 25, 1963, p. 1.

Again, ad hoc boards of senior officers at Headquarters were appointed to conduct the necessary studies. The Vessel Requirements Report was originally completed in November 1959 and amended in June 1962. In 1963 the Secretary of the Treasury approved the report which provided for a plan of replacing overage vessels over a twelve year period. The Shore Units Requirements Report was submitted in May 1962 and approved in January 1963 by the Secretary of the Treasury. This report called for substantial changes in the number and type of operational units to be accomplished over a period of ten years.

These three major facility reports, as revised and updated, were major steps forward in Coast Guard long-range planning. Since their submission they have been the primary basis for the annual Acquisition, Construction and Improvement appropriation budget requests. New aircraft, vessels and shore units throughout the Coast Guard are a testament to the success of these plans. Despite their positive effect of revitalizing the physical plant of the Coast Guard, these major plans had shortcomings--largely due to their ad hoc nature and facility orientation. Regarding the Aviation Requirements Report, one student observed:

> The detailed recommendations for replacement of aircraft were not justified on the basis of explicit efficiency or effectiveness criteria, and the measure of assistance provided by the other "tools" of the Service--its vessels and shore units--was not reflected in the report. Since the recommendations were not based upon explicit criteria, nor were they supported by statistical data, it must be concluded that these recommendations were based only upon the professional judgement of the members of the ad hoc board.[1]

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[1] Hawkins thesis, p. 86.

Essentially the same comments were made regarding the Vessel Requirements Report. However, in the case of the Shore Units Study a different approach was taken than that of the two previous studies:

> In arriving at its recommendations, the committee has laid particular emphasis on units with an operational mission. They have done this by establishing service-wide standards which are designed to furnish reasonable Coast Guard coverage of our coastal waters. These standards were then applied to determine the location of operational stations and the personnel and equipment required. The standards used by the committee incorporated the aviation units and vessels recommended in the Aviation and Vessels Reports . . .[1]

The deficiencies of the facilities reports can be summed up as having the combined defects of the requirements and priorities approaches to military planning discussed by Hitch and McKean in their book on Defense economics:

> The question: What are the payoffs and the costs of alternative programs? may not be explicitly asked during the process of setting the requirement or deciding upon the budget. . . . In choosing weapons systems, we have to decide how much effort or how many resources should go to each item. The "priorities approach" does not solve the allocation problem.[2]

During August 1963, shortly after the commencement of the Program Budget Pilot Study, the results and recommendations of two separate planning studies conducted at Coast Guard Headquarters were submitted to the Chief of Staff. The first of these studies dealt with budgetary planning procedures with

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[1]U. S., Coast Guard, Commandant Memorandum to the Secretary of the Treasury Douglas Dillon, Report on the Requirements for Coast Guard Shore Units, May 1962, January 14, 1963, p. 1.

[2]Charles J. Hitch and Roland N. McKean, The Economics of Defense in the Nuclear Age (New York: Atheneum, 1965), pp. 121, 123.

essentially the same approach [illegible] resulting [illegible]
[illegible] report. However, in the case of the [illegible]
[illegible] a different approach [illegible] that of the two [illegible]
studies.

> In spite of its recommendations, the Committee [illegible]
> [illegible] initiate action to [illegible] be [illegible]
> [illegible]. They have done this by [illegible] drafting-
> style standards which are designed to [illegible] maximum
> [illegible] of [illegible] utility. [illegible]
> [illegible] have also [illegible] the [illegible] of
> [illegible] [illegible] and the [illegible] [illegible] the
> [illegible]. The standards used by the Committee [illegible]
> the [illegible] drafter and [illegible] [illegible] by the Division
> and Texas Courts . . .[1]

The differences of the [illegible] reports [illegible] be traced
to [illegible] the [illegible] beliefs of the [illegible] and
[illegible] purposes [illegible] to [illegible] [illegible] [illegible]
and [illegible] to [illegible] [illegible] [illegible] [illegible].

> The question: [illegible] are the [illegible] and [illegible] of
> [illegible] [illegible] and [illegible] [illegible] [illegible]
> the purpose of [illegible] the [illegible] [illegible] [illegible]
> the future. . . . In choosing [illegible] options, we [illegible]
> [illegible] the most effort [illegible] [illegible] should [illegible]
> to [illegible]. The [illegible] [illegible] [illegible]
> the [illegible] [illegible].[2]

During [illegible] 1965, [illegible] after the [illegible] of
the Texas Penal Code study, the [illegible] and recommendations
of the [illegible] Council [illegible] [illegible] [illegible]
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1. C. [illegible], Texas Penal Code [illegible] [illegible] [illegible]
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[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
at 1.

2. [illegible], Style and Policy 3, [illegible], [illegible] [illegible]
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[illegible].

emphasis placed on the development of budget programs; the second study dealt with long-range planning and the potential for using operations research techniques.

Budgetary Planning Procedures

Acquisition, Construction and Improvement Planning. The primary vehicle for capital expenditure budget planning in the Coast Guard is a continuing Advance Acquisition, Construction and Improvement Program. This program accumulates on project forms information on the urgent proposed capital improvement items to base selection of projects for inclusion in the budget and also for justifying appropriation requests. The system also provides a total listing of requirements by priorities for accomplishment when funds become available.[1] The study on budgetary planning procedures recognized that much progress had been made in this are of budget planning, particularly due to the inputs provided by the above mentioned facility plans and a requirement for Master Development Plans for large shore units such as the Coast Guard Academy.

Progress made notwithstanding, the study pointed out a fundamental weakness in the existing system with respect to the effect capital improvements were having on operating expenses:

> At present, the cost of operating a unit in the future receives little consideration when the basic decision is made to construct the new facility. The Vessel Requirements Board, in its financial plan, did not mention the subject of operating costs . . . This generation of increased operating costs is not restricted to new units, but also

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[1] U. S., Coast Guard, The Manual of Budgetary Administration (CG-255), July 1, 1962, p. 2-15. Cited hereafter as ManBudAdmin.

> is involved in placing new equipment on existing units. . . . It would appear to be a cardinal principle of good planning to have the total costs of a program clearly presented to the program analyzer when he is preparing his recommendations and to have the decision maker aware of the full financial impact of a program.[1]

The unplanned rise in operating costs of new units was having an adverse effect on operating expense maintenance programs by causing the maintenance backlog to expand. With the capital improvements program barely underway, the situation could become more critical as more and more new units became operational. Another outcome of the lack of total costing was that the facts at hand were a poor basis for comparing alternative projects from the standpoint of a sound economic analysis.

Operating Expense Appropriation Planning. Planning for the Operating Expense Appropriation centered around an annual "Call for Program Changes" issued by the Program Analysis Division in early December of each year. A program change was defined as any increase or decrease in personnel, operating units, or services proposed for the budget year and three successive years.[2] Sponsoring offices at Headquarters submitted their requests for program changes by January 20. The requests were then analyzed and reviewed, and decisions were made regarding their inclusion in the spring Preview or Forecast Stage of the budget.

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[1] U. S., Coast Guard, Analysis of Budgetary Planning Procedures in Headquarters, August 1, 1963, p. 16. Cited hereafter as Budget Planning Procedures.

[2] ManBudAdmin., p. 2-13.

According to the study on budgetary planning, this system had several basic defects. The annual planning concept resulted in a new set of program change submissions each year which, in addition to being a major paperwork processing effort, tended to detract from year to year continuity. Analyzing the requests was difficult since they were submitted in non-standard memorandum format. A further defect was the insufficient time available for analyzing the program change requests by concentrating the review period during the months of February through April.

A general weakness in the budget planning procedures was the fact that detailed justifications were not required for the Preliminary estimates:

> This approach assumes that the main value of program justifications is in the final budget writeup and in providing supporting data with which to answer inquiries from the budget reviewers. These are important uses for the information. However, the principal use of careful and detailed program justifications is in the decision making process, which under existing procedures, tends to be in the . . . 1 February to 15 April period.[1]

Increasing the amount of detailed information supporting the program change requests would further necessitate spreading the review time out over many months.

Recommendations for Improvement. The Study on Budgetary Planning Procedures proposed that a standard set of forms be used for submitting requests for program changes. These forms would provide needed information which was then lacking and which would be submitted for both capital improvement projects and operating

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[1]Budget Planning Procedures, p. 22.

[illegible] to the study of economic planning, this system
[illegible] several basic defects. The central planning bureaucracy
[illegible] is also not a [illegible] democratic body [illegible], in
addition to being a major [illegible] economic effect, because of
[illegible] they fail to [illegible] efficiently. Maximizing the [illegible]
the difficulty arises that they have operated in conventional
[illegible] terms[1]. A further defect was the [illegible] lack
[illegible] for [illegible] the [illegible] direct [illegible] to [illegible]
[illegible] the market [illegible] within the [illegible] of [illegible] [illegible]
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[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible]:

> [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

expense changes.

It was recommended that the program change requests be submitted anytime during the year with cutoff dates established which would correspond to successive stages in the budget cycle. This would permit consideration of all programs within any monetary ceiling imposed for a particular budget stage. Annual resubmission of complete program changes would not be required unless there were radical changes. Continuing programs generally would require some modification annually, but this was to be accomplished by submitting one or more revised pages rather than resubmitting the entire request.

Implementation. First used in the spring of 1964 for the fiscal year 1966 forecast, and with some minor changes to the forms initially used, the system recommended by the Budgetary Planning Procedures was formally implemented in September, 1964.[1] Recognizing the emphasis being placed on a new system of integrated planning, programming, and budgeting throughout the federal government, the Chief of Staff revised the system in November 1965 by requiring a consideration and description of alternatives for each program change proposal.[2]

Long-Range Planning

One of the recommendations of the Roles and Missions Study

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[1] U. S., Coast Guard, Headquarters Instruction 7110.2, Instructions for Submission of Request in Program Level for Use in Budget Preparation, September 10, 1964, p. 1.

[2] U. S., Coast Guard, Headquarters Instruction 7110.2A, Instructions for Preparation and Use of Request for Change in Program Level (Forms CGHQ-4302, A,B,C) for budget development, November 9, 1965, p. 1.

was that, as a logical planning step, an operations research study should be conducted for use by the Coast Guard in developing a coordinated long-range plan for mission accomplishment. Underlying this recommendation was the following statement:

> The problem is basic: How can one correlate the tremendous number of variables in a manner that will permit an orderly, and reasonably scientific, process of decision making? The variables are almost limitless . . .
> . . . . . .
> Consideration should be given to the use of one of the more prominent and tested operations research techniques --simulation. In this case, simulation techniques would permit the use of a mathematical model that would place into juxtaposition not only the variables mentioned above, but many more. Simulation would permit computer analysis of large masses of data, include many variables, and would permit appraisal of various alternative courses of action based thereon.
> . . . . . .
> In summary, this approach would substitute properly designated mathematical judgements for impressions which vary among individuals. Thus, those factors which may properly be numbered could be handled via data processing equipment, reserving the application of judgement to those significant matters requiring a combination of experience and judgement.[1]

Acting on the recommendations of the Roles and Missions Study, the Commandant appointed an ad hoc board in November 1962 to study long-range planning procedures and to determine the feasibility of applying operations research techniques toward solving management and planning problems in all areas of Coast Guard responsibility. This board completed its study in August 1963 and reported to the Commandant:

> We have developed for your approval a publication entitled "Coast Guard Objectives" and have coordinated an operations research feasibility study by a private firm under contract to the Bureau of the Budget. In addition to these specific actions, a number of recommendations dealing with the Coast Guard planning process and its future application

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[1] Roles and Missions Study, I, pp. C-70, 71.

were developed.[1]

Coast Guard Objectives. The general objectives toward which future specific planning should be directed for each of the ten missions of the Coast Guard are contained in the publication developed by the Long-Range Planning Board.[2] Additionally, broad objectives are also stated for research, automation, organization, career planning, communications, public information, and cooperation with other government agencies. The purposes of "Coast Guard Objectives" are:

> To set forth a basic Coast Guard philosophy; to define Coast Guard objectives in relation to national objectives and assigned missions; and to provide long-range policy guidelines for use in planning and operations. Its merit lies not in originality, but in the positive assertion of philosophy, objectives and policy.[3]

Operations Research Developments. The operations research feasibility study, coordinated by the Long-Range Planning Board, was conducted by Management Technology, Inc. The findings of the study, concluded in August 1963, showed that it would be feasible and practicable for the Coast Guard to apply operations research techniques to many of its management and planning problems. The study outlined eighty-eight problem areas, and identified twenty-five operations research projects considered to have merit. Management Technology, Inc. recommended

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[1] U. S., Coast Guard, Report on Coast Guard Long Range Planning Organization and Staffing, August 21, 1963, p. 1.

[2] See supra, pp. 4, 5 for a summary of these objectives.

[3] Coast Guard Objectives, p. i.

that the Coast Guard "inaugurate an Operations Research effort,"[1] and that it undertake an initial program of four short- and long-range projects:

(1) Long-Range Planning Simulation Model
(2) Major Resources Replacement Policy
(3) Personnel Utilization System
(4) Multi-Agency Inspection Study[2]

Acting on the recommendations of the operations research feasibility study, several members of the ad hoc board on long range planning were appointed a nucleus of a long-range planning and operations research organizational component by the Chief of Staff in November 1963. As its first ask this group prepared budgetary justification for the additional funds that would be required to implement the recommendations of the operations research feasibility study. Next, the group prepared contract specifications for the project considered to merit highest priority--development of a long-range planning simulation model encompassing all missions of the Coast Guard.

In April 1964, a contract was awarded for the initial phases of the simulation model development. Because of the complexities involved in analysis, design, and computerization, the model is not expected to be available for Coast Guard use until July 1966.[3] Appendix I gives a general non-technical

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[1]Management Technology, Inc., "The Application of Operations Research to Management and Planning Problems of the United States Coast Guard" (an unpublished report to the Bureau of the Budget, Executive Office of the President, 1963), p. II-1.

[2]Ibid., p. II-2.

[3]U. S., Coast Guard, Chief of Staff Memorandum to various Office and Division Chiefs, Long Range Planning Simulation Model, September 16, 1965, p. 1.

description of the simulation model.

Planning Organization Developments. As previously stated, long-range planning in the Coast Guard has been characterized by an ad hoc approach. One of the recommendations made by Management Technology, Inc. was that the Coast Guard should "organize an Operations Research and Planning Branch within the Program Analysis Division."[1] To a limited extent, operations research techniques in the general management area were being employed by a small Management Sciences staff of the Administrative Management Division. As previously mentioned, the nucleus of the Long-Range Planning Board was monitoring the development of the planning simulation model.

Although the functions of planning and operations research were interrelated, the Coast Guard did not concur with the recommendation that they be combined into one organizational component:

> To combine the entire operations research team with the long-range planning staff would have tended to structure both their respective activities into too narrow a field. Operations research techniques, while useful for long-range planning, have widespread application in other areas; similarly, planning should not be limited exclusively to operations research-oriented efforts.[2]

As a consequence, two new organizational components were introduced within the Office of the Chief of Staff in July 1964: a Long-Range Planning Branch within the Program

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[1] Management Technology Study, p. II-2.

[2] Allan Sturges and Thomas E. Hawkins, "Operations Research--its Evolution within the United States Coast Guard" (an unpublished paper, n.d.), p. 9. A copy of this paper was furnished by Commander Hawkins who is assigned to Coast Guard Headquarters.

Analysis Division and a Management Sciences Branch within the Administrative Management Division. To provide project continuity, the Long-Range Planning Branch was to supervise and coordinate development of the simulation model; once the model was operational, its operation was to be turned over to the Management Sciences Branch. Meanwhile, the Management Sciences Branch began directing "in house" efforts toward some of the other high priority projects recommended by Management Technology, Inc.

Long-Range Planning System. In February 1964 a mission-oriented long-range planning system was introduced into the Coast Guard as a result of the planning studies mentioned above. The objectives of this system were:

> a. To provide a uniform, effective and consistent means for planning at all levels of planning responsibility.
>
> b. To create a Master Plan, subordinate plans, and a system for keeping them current.
>
> c. To provide a framework for continuing evaluation of performance relative to established performance standards.
>
> d. To provide a means for comparison between current performance plans (available resources) and resource requirements.
>
> e. To establish: (1) Performance standards for each mission, as well as for personnel and materiel support. (2) Facility and logistic resource requirements to achieve and maintain planned performance levels over a ten-year period. (3) A firm basis for the budget plan.[1]

The Commandant recognized that an interim situation would prevail for two or three years to permit orderly development of newly required plans and investigation of operations research techniques.

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[1]U. S., Coast Guard, Commandant Instruction 5010.1, Coast Guard Long Range Planning System, February 14, 1964, pp. 2, 3.

CHAPTER IV

A QUICKENING PACE

Until the fall of 1965 the Coast Guard was proceeding with the implementation of an integrated planning-programming-budgeting system at a self-determined, orderly pace using an "evolutionary" approach. With the President's announcement of a system to be implemented throughout most of the Executive Branch and the subsequent initial implementing directive promulgated by the Bureau of the Budget in October, the Coast Guard became "locked-in" with and committed to a tight schedule of required actions imposed from above. It was necessary, therefore, to quicken the pace and adopt a "revolutionary" approach. Fortunately, the effort expended and actions taken in the preceding several years provided the Coast Guard with a firm foundation upon which it could build in carrying out the President's mandate.

Highlights of Bureau of the Budget Bulletin No. 66-3

The introduction of an integrated planning-programming-budgeting system in the Executive Branch was aimed at remedying shortcomings in planning and budgeting systems that generally prevailed throughout the departments and establishments:

> Program review for decision making has frequently been concentrated within too short a period; objectives of

Chapter IV

A Distinctive Plan

Until the fall of 1965 the Coast Guard was proceeding with the implementation of an integrated electronic-communications system at a very deliberate, orderly pace under an "evolutionary" approach. Plan for the Seventies envisioned a system to be implemented throughout most of the Seventies through the systematic initial implementation directive received by the Congress of the Budget in October, the Coast Guard received "permission" not to undertake in a short sequence of required actions described above. It was necessary, therefore, to develop the case and adopt a "revolutionary" approach. Fortunately, the effort required was lessened by the already several years provided the Coast Guard with a firm foundation upon which it could build its plan.

Flexibility of Design of the System

Flexible Yet Exact

The introduction of an integrated electronic-communications system in the Caribbean should be compatible with existing communications systems that generally meet the requirements and satisfactorily

Previous service the Utility should Previously been

> agency programs and activities have too often not been specified with enough clarity and concreteness; accomplishments have not always been specified concretely; alternatives have been insufficiently presented for consideration by top management; in a number of cases the future year costs of present decisions have not been laid out systematically enough; and formalized planning and systems analysis have had too little effect on budget decisions.[1]

Thus, the broad objective of the system is "to provide more effective information and analyses to assist line managers, the agency head, and the President in judging needs and in deciding on the use of resources and their allocation among competing claims."[2]

Three concepts form the basis of the new system. First, each agency must have the capability, using permanent specialized staffs, to conduct continuing in-depth analyses of the agency's objectives and programs to meet these objectives. Second, each agency must have a multi-year planning and programming process with an information system that presents data in meaningful categories essential to major decision making by top management. Third, an agency's budget process must be able to translate broad program decisions into more refined decisions in a budget context and present appropriate program and financial data for action by the President and Congress.[3]

Essential features of the system underlying the above broad concepts are:

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[1]U. S., Bureau of the Budget, Bulletin No. 66-3, Planning-Programming-Budgeting, October 12, 1965, p. 1.

[2]Ibid.

[3]Ibid., p. 2.

> (1) An output-oriented (this term is used interchangeably with mission-oriented or objectives-oriented) program structure (sometimes also called a program format) which presents data on all of the operations and activities in categories which reflect the agency's end purposes or objectives . . .
>
> (2) Analyses of possible alternative objectives of the agency and of alternative programs for meeting these objectives. Many different techniques of analysis will be appropriate, but central should be the carrying out of broad systems analyses in which alternative programs will be compared with respect to both their costs and their benefits.
>
> (3) Adherence to a time cycle within which well-considered information and recommendations will be produced at the times needed for decision-making and for the development of the President's budget and legislative program.
>
> (4) Acceptance by line officials (from operating levels up to the agency head), with appropriate staff support, of responsibility for the establishment and effective use of this system.[1]

The principal decision making products of the system are a comprehensive multi-year Program and Financial Plan that is systematically updated, program memoranda prepared annually and used in the budget spring Preview, and in depth special studies to be made from time to time. The Program and Financial Plan is to be set forth in terms of the output-oriented program structure developed by each agency and will normally cover a period of five years. To the extent possible, the plan is to express objectives and planned accomplishments in quantitative non-financial terms and also associate physical data with financial data to show the costs of carrying out the described activities. As modified by guidance received from the Bureau of the Budget and the President following the annual spring

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[1] Ibid., pp. 2, 3.

Ibid., p. 3.

Preview, the Program and Financial Plan will be the basis for annual fall budget requests.[1]

For each program category of an agency, a Program Memorandum is to be prepared annually using an analytic approach. Summarizing the Program and Financial Plan for that category and presenting a succinct evaluation and justification, each memorandum should:

> Appraise the national needs to be met for several years in the future (covering at least as many years as the Program and Financial Plan), assess the adequacy, effectiveness, and efficiency of the previously approved Plan to meet those needs, and propose any necessary modifications in the previously approved Plan, including new legislative proposals.[2]

At the request of the Bureau of the Budget agency top management, or on the initiative of analytic staffs, special studies will be conducted on a variety of specific topics. These studies are viewed by the Bureau of the Budget as being an important part of each agency's total analytic effort.

Concerning the relation of the system to the budget process, a key mandate is that:

> Over the next few years agency operating budgets used to allocate resources and control the day to day operations are to be brought into consistency with the Program and Financial Plan. Performance reports that show physical and financial accomplishments in relation to operating budgets should also be related to the basic plan.[3]

Although the President at a news conference referred to the system of planning, programming, and budgeting as being "new and . . . very revolutionary,"[4] it is apparent that the

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[1] Ibid., pp. 5-7. [2] Ibid., p. 8. [3] Ibid., p. 9.

[4] U. S., President, "The President's News Conference, August 25, 1965," Weekly Compilation of Presidential Documents, August 30, 1965, p. 143.

system resulted from and was generally patterned after the system introduced in the Department of Defense in 1961.[1] However, to the extent that existing systems had to be changed, it might be said that the system was indeed new and revolutionary insofar as agencies and establishments required to implement the system were concerned.

Initial Implementing Action Taken by the Coast Guard

Program Structure

Because it was the foundation of the entire system, the first step in implementing the Bureau of the Budget directive was to develop a suitable program structure. Compared with agencies and bureaus that were not to some extent output-oriented in their management thinking, this was a relatively easy task for the Coast Guard. As indicated in the above chapters, broad mission categories acceptable to the Treasury Department and the Bureau of the Budget had already been developed and used in the fiscal year 1967 budget request.

What remained to be done was to develop mission subdivisions for each Coast Guard mission, program elements for the subdivisions, and then determine where these categories fit under the major Treasury Department program categories. In

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[1] See for example, David Novick (ed.), Program Budgeting: Program Analysis and the Federal Budget (Washington: U. S. Government Printing Office, 1965), chap. 1; and Harry C. White and Robert J. Massey, "Program Packaging--Opportunity and Peril," United States Naval Institute Proceedings, LXXXVII (December, 1961), 23-35.

coordination with officials of the Treasury Department, it was decided that most of the Coast Guard missions would fall under a major Treasury Department category of Assistance to Maritime Commerce.[1] Figure 7 shows the structure developed for the search and rescue mission of the Coast Guard.

Quantified Objectives and Accomplishments

Having developed the program structure, the Coast Guard's next step was to develop goals and accomplishments in quantified non-financial terms for each element in the structure. This proved to be an extremely difficult task which was hampered by a short period of time for development in order to meet the tight submission schedule that had been imposed. The initial submission of objectives and accomplishments to the Treasury Department in early February 1966 showed only criteria and parameters; the actual numerical quantities remained to be developed for submission at a later date.[2]

To illustrate the type of criteria developed, under the Search and Rescue program subcategory goals were expressed in terms of time required to arrive at a reported distress scene. The criteria were further refined by defining areas in terms of

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[1]U. S., Coast Guard, Headquarters Notice 5010, Planning-Programming-Budgeting System, December 17, 1965, enclosure (2).

[2]U. S., Coast Guard, Memorandum from Commandant to Director Office of Planning and Program Evaluation, Treasury Department, Planning, Programming and Budgeting System, February 2, 1966, p. 1.

Code	Structure
5	ASSISTANCE TO MARITIME COMMERCE
5 01	SEARCH AND RESCUE
5 01 01	LONG RANGE SAR
5 01 01 01	Long Range SAR-Ships
5 01 01 02	Long Range SAR-Aircraft
5 01 02	MEDIUM RANGE SAR
5 01 02 01	Medium Range SAR-Ships
5 01 02 02	Medium Range SAR-Aircraft
5 01 03	SHORT RANGE SAR
5 01 03 01	Short Range SAR-Ships
5 01 03 02	Short Range SAR-Aircraft
5 01 04	COASTAL AND HARBOR SAR
5 01 04 01	Coastal & Harbor SAR-Ships
5 01 04 02	Coastal & Harbor SAR-Aircraft
5 01 04 03	Coastal & Harbor SAR-Shore Units
5 01 04 04	Coast Guard Auxiliary
5 01 05	AMVER
5 01 05 00	Automated Vessel Reporting System
5 01 06	SAR MANAGEMENT
5 01 06 01	SAR Control and Coordination
5 01 06 02	SAR Research and Development

DEFINITION OF STRUCTURE LEVELS

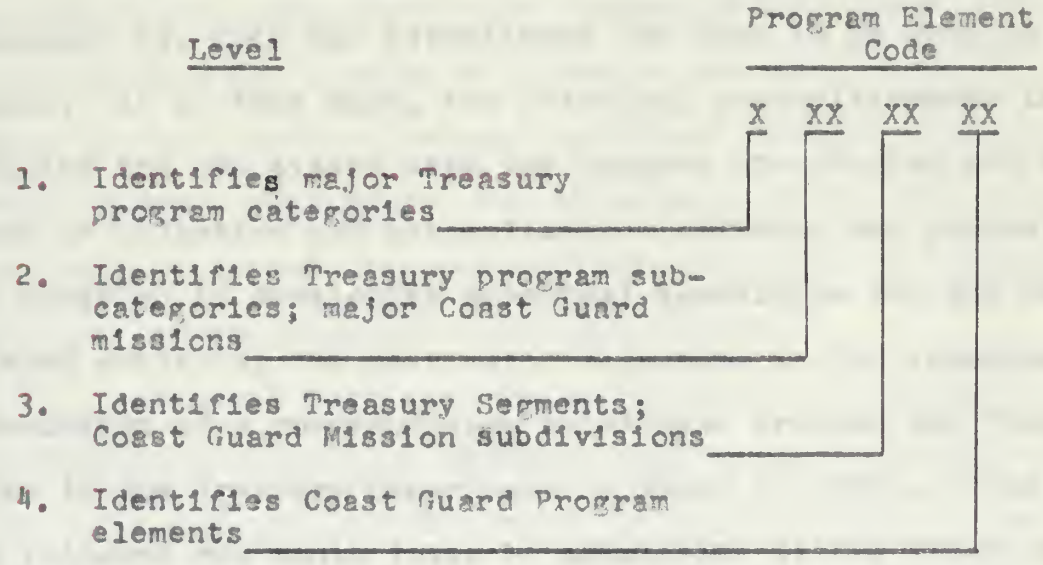

Fig. 7.--Example of Coast Guard Program Structure.

long, medium, short, and coastal/harbor belts off the coasts of the continental United States, Alaska and Hawaii. Accomplishments were expressed in terms of the number of search and rescue cases requiring Coast Guard response and the percentage of these cases actually responded to within the goal time for each belt area.

Goals for the Aids to Navigation program subcategory were expressed in terms of percentage degree of reliability for each program segment. For example, the goal for lighted bucys was a yet undetermined percentage of outages per one hundred buoys per year. Accomplishments for buoys were expressed as the number of buoys operated and the actual percentage of outages experienced.

Future Required Actions

It was mentioned in the preface that a cut-off date of February 18, 1966 was established for data to be used in this paper. As of that date, the principal accomplishments in implementing the new system were the program structuring and development of objective and accomplishment criteria and parameters. In addition to developing numerical quantities for the established criteria, the next major milestone in the schedule was the submission of a comprehensive multi-year Program and Financial Plan to the Treasury Department by March 15, 1966. This was to be followed one month later by submission to the Treasury Department of the data required for preparation of program memoranda.

Beyond these immediate actions is a task of large

proportions in solving a host of technical and managerial problems. Among the more prominent of these problems are refinement of the program structure and method of allocating costs; development of a management information system that integrates the program element structure, non-financial units of measurement, cost accounting, personnel, and workload data; and the obtaining of additional qualified management engineering personnel to attain the necessary level of analytical skills required by the system.

To illustrate one of these problem areas, the initial program structure placed capital outlays at the same level as Coast Guard missions rather than subdividing capital outlays under each mission. This is contrary to the concept of assigning all costs which are associated with a mission to that mission and can result in significant distortions. For example, in designing a ship to be used primarily for search and rescue a decision might be made to increase the maximum speed of the ship by five knots to increase military readiness capability. Under current procedures, the attendant added cost, which could be several hundred thousand dollars, would not be reflected in the cost of the military readiness mission.[1]

Although the Coast Guard seriously considered having a capital outlay subdivision under each mission category during the initial program structuring, it was necessary to have a separate category for all capital outlays due to technical

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[1]Personal interview with Commander William H. Fitzgerald, Assistant Chief, Budget and Cost Analysis Division, CG Headquarters, February 10, 1966.

[3]Personal Interview with Commander Gillis T. Brinkworth, Military Chief, Budget and Cost Analysis Division, "Headquarters," February 15, 1967.

difficulties inherent in the multi-mission nature of capital acquisitions. It was anticipated that a more refined structure and cost allocation process would be developed within a year.[1]

In concluding this chapter, a statement made by the Committee for Economic Development regarding the implementation of the planning-programming-budgeting system seemed to be appropriate:

> Too much should not be expected too soon from President Johnson's initiative. The planning-programming-budgeting system will--and should--be subject to continuing refinement and improvement. First efforts undertaken in the departments and agencies and in the Bureau [of the Budget] will certainly require substantial revision. This is a valuable feature of the system; it permits and encourages the informed and expeditious adjustment of programs and resource commitments to accommodate changed conditions, better information, and refinements in thinking. The problems of introduction are serious but not insurmountable. Full implementation of the concept will not be accomplished in weeks or months; it will require sustained and determined effort by all concerned.[2]

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[1]Personal interview with Commander Thomas E. Hawkins, Chief, Long Range Plans Branch, CG Headquarters, February 18, 1966.

[2]Committee for Economic Development, Budgeting for National Objectives, Statement by the Research and Policy Committee (New York: Committee for Economic Development, 1966), p. 37.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

This study has reviewed what planning, programming, and budgeting developments had taken place in the Coast Guard during the past ten years. A question remains as to what contributions these developments have made toward program effectiveness in the Coast Guard and toward implementing the President's new program budgeting system.

The Roles and Missions Study filled and clarified legislative gaps regarding duties and responsibilities of the Coast Guard. Coupled with the three facility studies and with the support of the Treasury Department, the Roles and Missions Study gave the Coast Guard solid justification and plans for a badly needed, extensive program of modernizing, replacing, and augmenting its physical plant.

Recommendations contained in the Roles and Missions Study touched off a series of studies on long-range planning, budget planning, and program budgeting. A dominant factor that had to be contended with in all of these studies was the multi-mission nature of most Coast Guard operating units. Implementation of a number of recommendations made in these studies has resulted in progress toward orienting management thinking along mission lines and providing better decision-making tools for the allocation of resources.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Long-range Coast Guard objectives were defined in relation to national objectives and assigned missions and were promulgated in one publication. Broad and general in nature, the objectives presented the best estimate of the Coast Guard's future direction and provided a basic Coast Guard philosophy and long-range policy guidelines for use in planning and operations.

A mission-oriented long-range planning system was introduced which focused increasing attention on integrated long-range planning. As a major step away from an ad hoc approach to planning, a Long Range Plans Branch was established in the office of the Chief of Staff to provide continuing guidance and coordination for the planning functions.

As an important adjunct to planning and programming, simulation and other operations research techniques were introduced at Coast Guard Headquarters. The analytic efforts thus far represent only a modest beginning compared with potential applications. However, the efforts do indicate a significant trend toward furnishing Coast Guard decision-makers with more rational and meaningful information to supplement their intuition and judgment.

Budget programming was strengthened in several areas. A standard set of forms was developed for submitting program changes. These forms require more detailed information, including a discussion of alternatives, to justify program changes. Procedures were changed to lengthen the program review period.

Budget document activities for the Operating Expense Appropriation were changed from a functional to a mission basis.

Through development of program cost distribution procedures, it was possible to distribute approximately eighty percent of the operating expenses to mission programs. Although some of the cost distribution criteria involve arbitrary assumptions that need to be refined, the Coast Guard has gained a keener insight with regard to the cost of each of its missions.

Comparing the above progress with the concepts contained in Bureau of the Budget Bulletin No. 66-3 indicates that the two are consistent. Thus, although much additional work remained to be done, it is concluded that had this progress not been made, implementing the President's new program budgeting system would have been significantly more difficult for the Coast Guard.

Initial implementation efforts were not free from problems. Among the more significant problems encountered by the Coast Guard were meeting a tight time schedule, refining the program structure, and defining and quantifying program objectives and performance accomplishment factors.

The progress made during the past few years and the initial efforts by the Coast Guard in implementing an integrated planning-programming-budgeting system raises a question regarding organization. When the Program Budget Pilot Study recommendations were approved by the Chief of Staff in the spring of 1964 one of the criteria established was that there would be no major changes in the formal organization or in the control of funds. Now that the President's new system has increased the scope and complexity of planning, programming, and budgeting, ought not a comprehensive study be made of the organization of Coast Guard Headquarters?

Such a study, if made, should: (1) evaluate the present organization from the standpoint of decision-making process effectiveness and mission program management, (2) investigate the pros and cons of a "mission manager" concept with the manager having total mission authority, responsibility, and fund control within guidelines established by the Commandant and Chief of Staff, (3) make appropriate recommendations for organizational improvements that include supporting data information system requirements, and (4) be conducted by a private management consultant firm.

The introduction of an integrated planning-programming-budgeting system throughout the federal government should provide a fertile field for future research. One suggested project would be to analyze the requirement of quantifying objectives and performance in non-financial terms. Such a project could explore the difficulties experienced in refining the quantified factors to make them meaningful to management, and to determine what impact this new and revealing information has had on decision-making.

APPENDIX I

NON-TECHNICAL DESCRIPTION OF THE LONG-RANGE PLANNING SIMULATION MODEL

The Long Range Planning Simulation Model is a probabilistic, mathematical representation of the operational demands placed upon the Coast Guard and its response to these demands. Except in an indirect manner, the model will not have the capability to analyze non-operational problems. The basic construct of the model consists of four major components:

(1) Resource file. Mathematical description of the type, location, capability, and cost of Coast Guard resources, existing or hypothetical.

(2) Demand file. Mathematical description of the type, location, time, and severity of operational demands made upon Coast Guard resources, expressed in probabilistic terms.

(3) Environment file. Mathematical description of the extent to which the capabilities of Coast Guard resources are degraded due to environmental factors, and a probabilistic statement of these factors.

(4) Policy and doctrine file. Mathematical description of the rules by which resources are selected to respond to demands.

The purpose of the model is to give the Coast Guard an analytical tool by which it can test alternative mixes of resources, test alternative levels of demand, and test alternative policies. The output of the model will be information for the particular problem and set of alternatives being considered, concerning utilization of resources, effectiveness in meeting demands, and the cost of accomplishment. It is emphasized that the model will only simulate the real Coast Guard; the model will not duplicate historical events, nor will it be able to predict the future. Per se, the model will not make decisions. However, it is intended that the outputs from the model will become another input into the Coast Guard's decision-making process.[1]

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[1] U. S. Coast Guard, Chief of Staff memorandum to various Office and Division Chiefs, Long Range Planning Simulation Model, September 16, 1965, enclosure (1), no p. no.

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